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Poetry.

MUTUAL ASSISTANCE.

A man very lame
Was a little to blame
To stray from his humble abode ;
Hot, thirsty, bemired,
And heartily tired,
He laid himself down in the road.

While thus he reclined,
A man who was blind
Came by and entreated his aid ;
" Deprived of my sight,
Unassisted to-night,
I shall not reach home, I'm afraid."

" Intelligence give
Of the place where you live,"
Said the cripple, perhaps I may know it ;
In my road, it may be,
And if you'll carry me,
It will give me much pleasure to show it.

Great strength you have got,
Which, alas ! I have not,
In my legs so fatigued every nerve is,
For the use of your back,
For the eyes which you lack,
My pair shall be much at your service."

Said the other poor man,
" What an excellent plan !
Pray, get on my shoulders, good brother ;
I see all mankind,
If they are but inclined,
Can constantly help one another."

MORAL COSMETICS.

BY HORACE SMITH.

Ye who would save your features florid,
Lithe limbs, bright eyes, unwrinkled forehead
From age's devastation horrid,
Adopt this plan,—
'Twill make, in climate cold or torrid,
A hale old man.

Avoid in youth luxurious diet,
Restrain the passion's lawless riot,
Devoted to domestic quiet,
Be wisely gay ;
So shall ye, spite of age's fiat,
Resist decay.

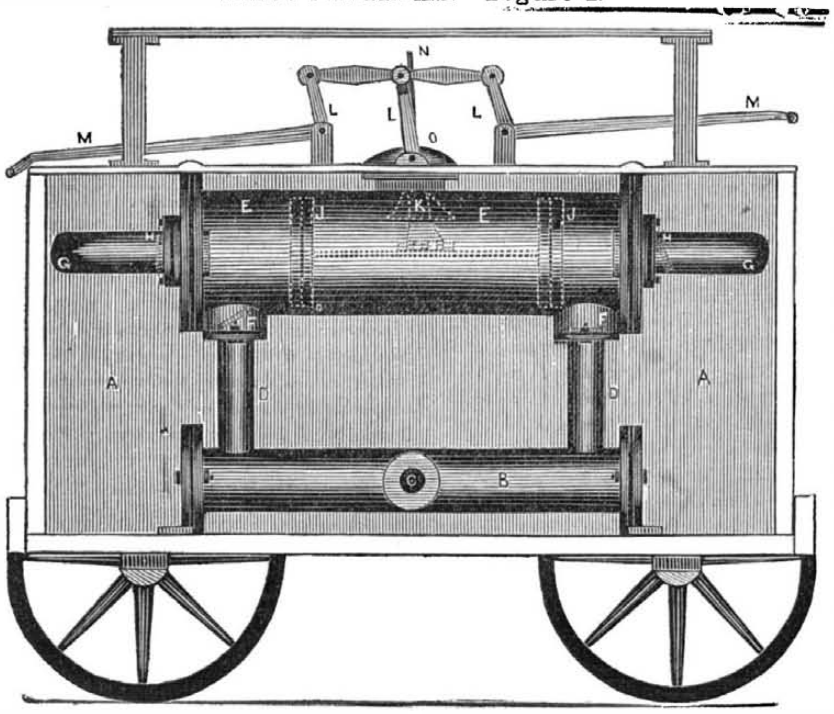
Seek not in Mammon's worship pleasure,
But find your richest, dearest treasure,
In books, friends, music, polishe'd leisure ;
The mind not sense,
Make the sole scales by which ye measure
Your opulence.

This is the solace, this the science,
Life's purest, sweetest, best appliance,
That disappoints not man's reliance,
Whate'er his state ;
But challenges, with calm defiance,
Time, fortune, fate.

A Noble Sentiment.

" I look," said Channing, " with scorn on the selfish great of the world, and with pity on the gifted prosperous in the struggle for office and power, but I look with reverence on the obscure individual who suffers for the right, who is true to a good but persecuted cause.

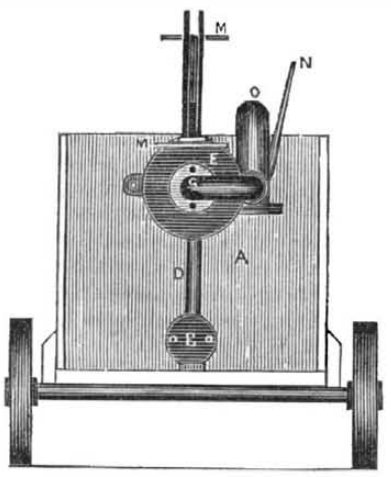
IMPROVEMENTS IN PORTABLE FORCE PUMPS AND FIRE ENGINES.---Figure 1.



This is an invention of Messrs. Benj. Joslyn, C. Jillson and Moses Clement, of Worcester, Mass., designed for a Fire Engine and as a portable force pump,—a machine no farmer should be without.

Fig. 1 is an elevated section and Fig. 2 is an end section, with the box removed. The same letters refer to like parts. A is a box mounted upon a carriage. B is the suction connecting pipe chamber. C the suction opening. D, vertical pipes from B, coupled to the underside of the double cylinder E E, in the ordinary way. The valves opening upwards and indicated by the dotted lines F F. There are two pistons I I, which work in the double cylinder. They are connected by one piston rod as represented by the dotted lines. At the middle of the double cylinder there is an enopening above, through which passes a vertical connecting rod. This connecting rod has a base toothed rack of an arc form K, as indicated by the dotted lines which rest on and mesh into a rack cast on a centre piece that connects the two piston rods together. The connecting rod is secured by a pivot joint on the deck and vibrates when operated by the brakes M M, through the angular side levers L L. H H, are the discharge valves opening outwards. G G, are the discharge pipes leading round into the air chamber O and from it through the pipe N. Any person acquainted in the least with a force pump will understand the construction and operation of the above hydraulic engine and will be able to form a very correct opinion of its merits. By favorable experiments made with a good sized working model, the inventors have been induced to take measures for securing a patent for the arrangement.

FIG. 2.



Song Birds.

The delightful music of song birds is perhaps the chief cause why these charming little creatures are in all countries so highly prized. Music is an universal language ; it is understood and cherished in every country, the savage, the barbarian, and the civilized individual, are all passionately fond of music —particularly of melody. But delightful as music is, perhaps there is another reason that may have led man to deprive the warblers of the woods and fields of liberty, particularly in civilized states, where the intellect is more refined, and, consequently, the feelings more adapted to receive tender impressions—we mean the associations of ideas. Their sweet melody bring him more particularly in contact with the groves and meadows—with romantic banks or beautiful sequestered glades —the cherished scenes, perhaps of his early youth. But, independent of this, the warble of a sweet song bird is in itself very delightful ; and to men of sedentary habits, confined to cities by professional duties, and to their desks most part of the day, we do not know a more innocent or more agreeable recreation than the rearing and training of these little feathered musicians.

A Musical Ear.

Each race has a musical ear peculiar to itself, expressed in its aboriginal songs, or native wild notes ; its more elaborate forms, when subjected to the processes of civilization and imitation ; its character, as expressed by the human voice—the original instrument of nature—and is imitated and expressed by the various human contrivances of brass and catgut, parchment and reed. Let us consider this wonderful art—the art of music ; this mysterious, and seemingly superadded, faculty, the musical ear, not necessary, nor required when absent ; nor to be improved when present ; unalterable, fixed, determined and eternal in every race, according to its nature.

The Skowhegan, Me. Press, states that a mine has been discovered at Moose Head Lake, in which the ore is abundant and the quality good, yielding about 90 per cent of pure lead.

RAILROAD NEWS.

The Western Railroad.

During the late session of Congress, the question of constructing a Railroad from Cairo at the junction of the Mississppi and Ohio, to Chicago and the public lands, was refered to a committee, and a favorable report had thereon, accompanied by a map which has since been printed, showing the importance of the undertaking in connexion with other roads projected and in operation in the United States. The report assumes the mouth of the Ohio to be the geographical centre of the United States, from whence, by the shortest railroad routes, when the several lines shall have been completed, the time required to reach any given point, at an average speed of 25 miles per hour, will be as follows, almost annihilating distances.

From Cairo to	*Hours.*	Cairo to	*Hours.*
Mobile,	19	Galena,	22
Pensacola,	22	Detroit,	24
New Orleans,	26	Buffalo,	33
Nashville,	6	Indianopolis,	12
Charleston,	28	Columbus,	19
Louisville,	12	Wheeling	24
Cincinnati,	16	Pittsburgh,	26
St. Louis,	8	Baltimore,	36
Alton,	9	Philadelphia,	38
Springfield,	10	New York,	42
Peru,	12	Boston,	51
Chicago,	16	Portland,	55

The report goes on to state, that by the most speedy steamboat routes the trip to New Orleans, from the mouth of the Ohio, requires four and a half days ; to Pittsburg, six days, and to Galena three and a half days.

Cincinnati Railroad.

At an election held last week by the citizens of Cincinnati to decide whether the city shall subscribe one million of dollars to the railroad from Cincinnati to St. Louis, resulted in the triumph of the friends of the measure, by a large majority. The sum would be expended in building the road from Cincinnati as far as the amount will allow, reserving a balance for the purchase of cars and locomotives, so as to put this portion of the road into use as rapidly as completed.

Syracuse and Rochester Railroad.

A very strong remonstance has been drawn up against the passage of a bill for the above road.

Railroad Accidents.

An engineer named Garvin was badly injured on the Central Railroad at Sharon N. H. on the 19th, by his head coming in contact with one of the cars. An Irish laborer was accidentally killed upon Messrs. Pratt & Lobdell's section of the Hudson River R R. near Fishkill on the same day, by being struck by a fragment of rock, during a blast. Upon the Fitchburg Railroad, at Somerville (Mass.) on 23d, a span of horses were killed and the driver seriously injured by encountering the down-train while crossing the track. The road at this place had just been reopened by a vote of the town.

The Great Bridge at Wheeling Va.

The people of Wheeling are going on rapidly with the construction of their vast bridge across the Ohio river, the span of which will be 1010 feet and its height above low water 97 feet, to avoid obstructing the steamboats. Its cost will be about a quarter of a million of dollars, or more than that of grading and bridging forty miles of railroad of an average degree of difficulty in Ohio. It is not likely that many such bridges will be erected considering the cost and risk attending them, but this project will stand out as a work honorable to the spirit of the people in Western Virginia.

J. C. Kirkwood, Esq. has been chosen Superintendent of the New York and Erie Railroad.

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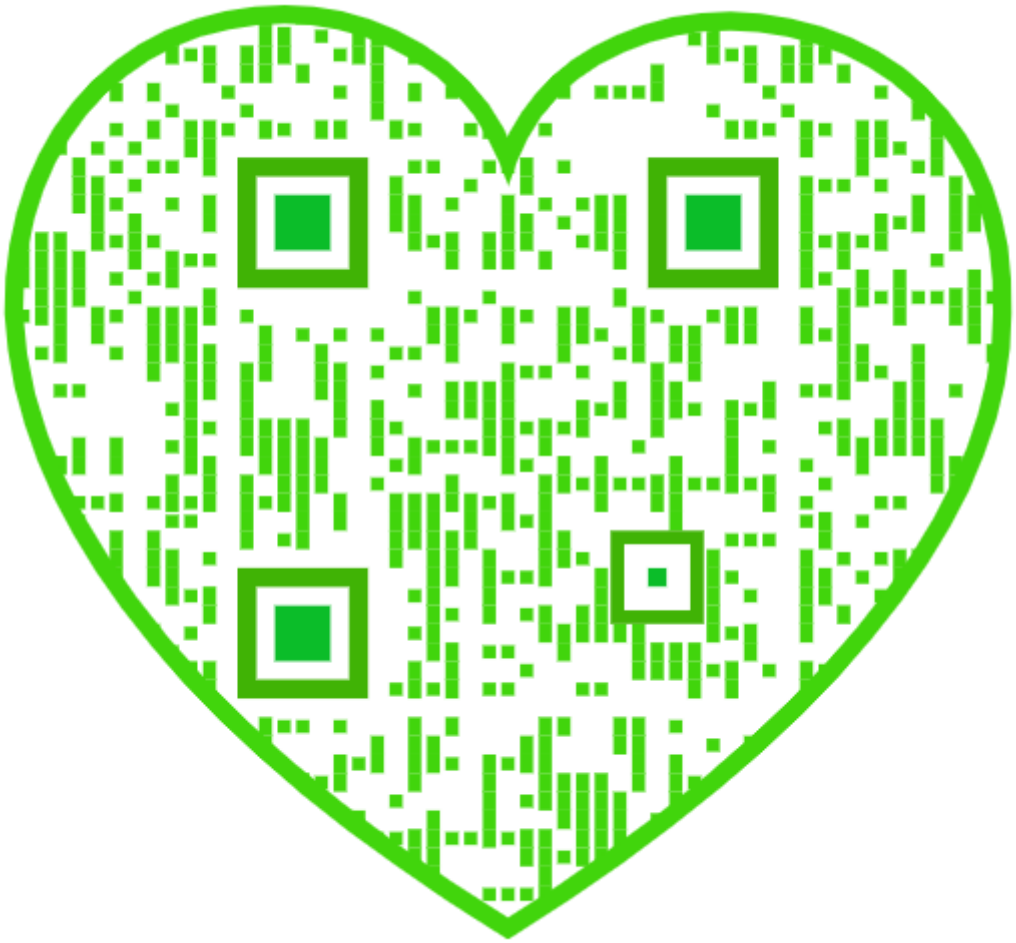

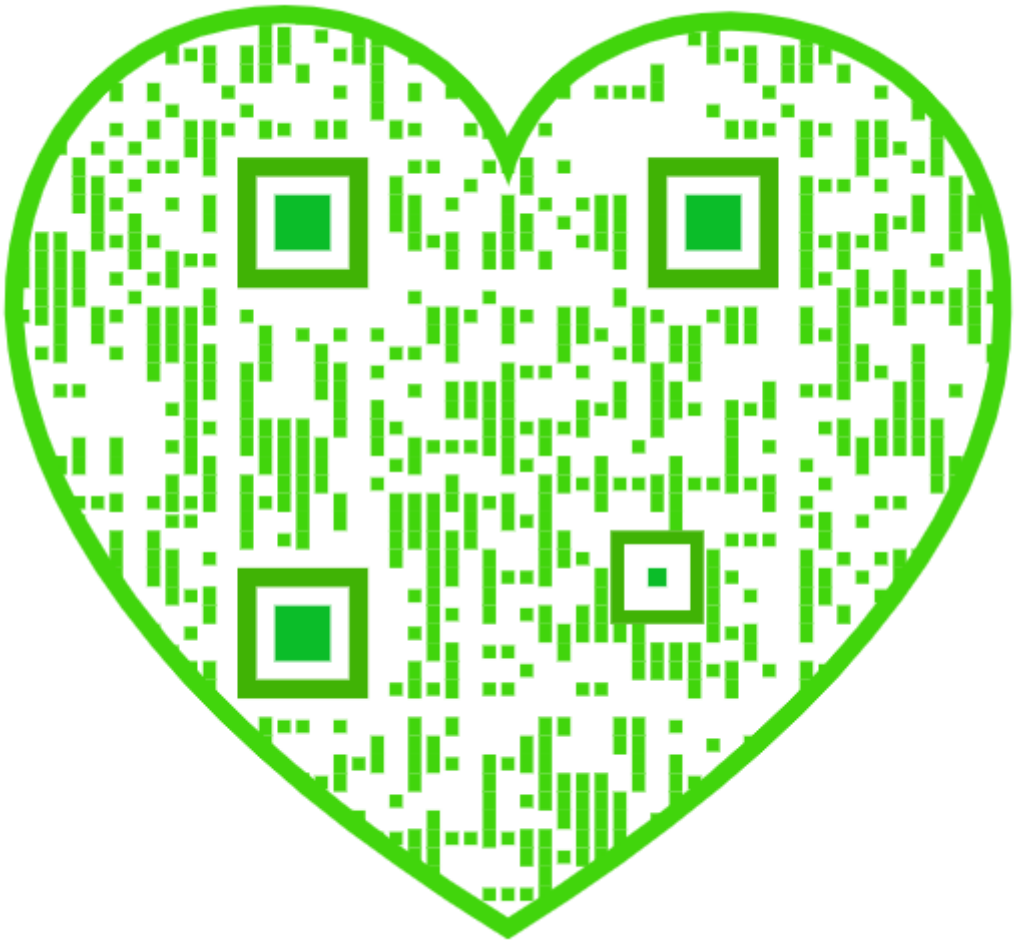

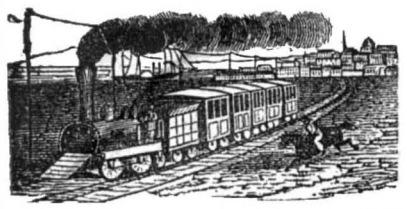

Newspapers.

Every subscriber is apt to think that a newspaper is printed for his special benefit, and if he finds nothing in it at one time that suits him, he thinks it good for nothing. There are but few papers that do not contain something of use to the subscriber. From the testimony of every one of our correspondents, we can say that our readers always find something to suit them in every number. We endeavor to make our paper one of facts, and although there may be nothing in one number to suit some subscribers, yet when they place it on file, it will happen somehow or other, that they will have to refer to some article in that very number, for information on some subject which came not under their cognizance before. It is true that we have not births, deaths and marriages in our columns because some people like to read these things, and we have not stories because some people love them; neither have we politics for the politician, but for all this, we endeavor to have somethidg for all. We have food for the young and food for the old, and it is of such a kind that those who partake of it, feel afterwards renewed at least in mental strength.

Low Pressure Condensing Engine Plates.

The second edition of this magnificent drawing is now ready and we are in hopes to be able in future to supply the demand for them. It is justly styled the best American drawing ever executed, and the demand we have had for them is evidence that the American public appreciate its beauty and desire to patronize the artist who executed it. Published by Munn & Co. to whom all orders should be addressed. Price single $3 with a book of notes refering to, and explaining its various parts. Address post paid letters to this office with the amount required, and they shall meet with prompt attention.

Fay's American Pencils.

Mr. Fay, of Concord, Mass., whose advertisement will be found on another page, has lately made some valuable improvements on his lead pencils for drawing. These pencils are sold at Jeroliman & Co.'s, No. 134 William street, this city, and they will no doubt supersede the imported kind.

Feltings.

We have lately seen samples of superior Feltings, manufactured by John H. Bacon, late of the firm of R. Bacon & Sons, Medford Mass. They are used for several purposes, viz: for filters, water and steam pipes, by calico printers, jewellers, marble workers, for emery wheels, boot felts, and for various other purposes. Mr. Bacon is also the manufacturer of Lambs' Wool Wadding so much admired by the ladies for cloaks, quilts, skirts sacks, hoods, &c. &c. and also for gentlemen's overcoats. Any persons in want of these articles will find them—wholesale and retail—as per advertisement in another column.

The Mississippi and the Lakes United.

The flood at Chicago seems to have been caused by the extraordinary overflow of streams which usually empty into the Mississippi. A Chicago paper dated several days before the freshet, says that the river Des Plaines, which usually empties into the Illinois, was seeking tide-water by way of the Niagara, and was flowing into the Chicago river, making such a current as to clear out the sand bars much more effectually than a dozen River and Harbor Bills of Congress. It is within the recollection of many citizens of Northern Illinois, that there was formerly natural water communication between the Lakes and the Mississippi, at the precise point at which this union is at present effected by the extraordinary amount of melting snow upon the surface.

Dissolve green vitriol and a little nitrous acid in water, and you have an invisible ink. In using it write with a new pen.

Coal and the Coal Operatives.

The Pottsville Emporium contains the proceedings in full of the meeting of Coal Operators, of which we have had a slight sketch by the telegraph.

The committee who reported the state of the Coal Trade was composed of Joseph S. Silver, G. H. Potts and Joseph G. Lawton.—They say in their report, that the average cost of every ton of first quality red ash coal, delivered in boat or car at Mount Carbon, is not less than $2! White ash coal, of equal uuality, contingencies being smaller, costs on the average 25 cents less. It is only what it brings beyond these figures that constitutes the profits of the miner.

The production of the coal regions for 1849 is estimated at 3,387,000. There was consumed last year 3,300,000. The regular increase in the consumption has been 25 per cent for several years previous to 1849, when it fell to 13½ per cent. Taking the lowest possible standard, there will be required 400,000 tons over the largest quantity that can be delivered to market by the carrying machinery from all sources in 1849.

If the regular increase be required, then there will be over 700,000 tons short. This, the report says, is the true state of the market and the prospects, and the miners, it argues, have the market in their hands. The report was adopted, with the following resolution:

Resolved, That in our opinion $2 25 per ton for red ash coal, and $2 per ton for white ash prepared and lump coal, at Mount Carbon, should be the prices fixed at the opening of the season.

The Emporium says that the movement has already had an effect, and advanced prices have been offered.

Artesian Wells in Wisconsin.

In Fon du Lac Wisconsin, they have bored to about 150 feet only and found a good supply of water. The water is of a beautiful soft quality—sometimes a little impregnated with sulphur—and is delivered at the surface, or as much above it within 39 feet as is desired. The cost is comparitively small. Contractors deliver it at the surface, finding everything, for $100. The boring is done by two men with entire ease, whatever may be the depth. A slight stratum of rock, commonly not over three feet is passed. This is worked through with a drill, to which a cable-rope instead of rods, is attached. The bore is lined throughout with sheet iron pipe, which follows the drill as fast as it proceeds.

There can be no fear from lead pipes when there is sulphur in the water. How wisely has the Great Geologist of nature ordered the mingling of materials in that lead country, to make it an agricultural one also.

Steamboats on the Upper Lakes.

The number of steamboats on the upper Lakes up to the year 1825, was one. In 1847 there were seventy steamboats—many of them of the most splendid description, and some of 1000 tons burthen, besides thirty propellers by steam! Thus it will be seen that only 24 years ago there was not one steamboat on these mighty inland seas. Who will attempt to say how numerous they will be in as many years more?

In 1835, only thirteen years ago there were not 5,000 white inhabitants between Lake Michigan and the Pacific ocean! Now there are nearly a million.

Chinese Fraud.

It was recently discovered that in a chest of tea imported into the port of Liverpool from China, were concealed several pounds weight of earth and rubbish. This is fully believed to have been concealed in the chest before it left China, because it was placed in the centre of the chest, the tea packed closely round it, and the paper in which the rubbish was concealed was of China manufacture.

A Good Month's Work.

There were spun at the Blackstone Mills, Woonsocket, R. I. for 4 weeks ending March 3, 1849, on 44 self-acting mules, numbering 19,836 spindles, 1,938,882½ skeins, about half of which was warp and half filling, being a daily average of four and seven and a quarter hundredths skeins per spindle. The mules are of Sharp and Roberts' pattern. Average number of yarn, 18½.

Quick Sailing.

The ship Sea Witch, Captain Waterman, which arrived at this port last week from Canton, in the unusually short space of 74 days and 14 hours, has, it appears, made a series of passages on her course out and home again, surpassing in quickness any previously made by a sailing vessel. These passages make a voyage round the world, which he has effected in 194 sailing days. Her runs are as follows: 69 days from New York to Valparaiso, 50 days from Callao to China, 75 days from China to New York. Distance run by observations from New York to Valparaiso 10,586 miles; average 6 2-5 miles per hour. Distance run from Callao to China 10,417 miles; average 8 5-8 knots per hour. Distance run from China to New York 14,255 miles; average 6 7-8 per hour. Best ten (consecutive) days run, 2,664 miles: average 11 1-10 per hour.

Recent Storms.

This Spring will long be remembered for its severe storms and floods. The Mississippi, the Illinois, and many other rivers have done great damage by their rolling waters. At Peoria in Illinois, the flood has been higher than any other within the memory of the oldest inhabitant. Houses have been overthrown and swept away, and down the valley of the Mississippi, the river has spread over a vast extent of country, carrying everything before it. In Iowa and throughout Missouri, the rivers have also been unusually high. From every part of our country we learn of severe storms. Bridges have been swept away and large tracts of country laid waste.

Bad News from the Peach Trees.

At the meeting of the Legislative Agricultural Society, recently held in Boston several experienced cultivators of fruit stated that, by recent examination of their peach trees, they had found that nearly all the buds were dead; and one gentleman, Mr. Wilder, of Dorchester, expressed the apprehension that the cherry buds would be found in much the same condition. This is attributed by some to the general severity of the past winter, and by others to the warm weather experienced in December, which is supposed to have caused the buds to swell, and the cold weather which followed had nipped the swollen bud.

Thunder and Snow.

On Wednesday, the 21st instant, about half past three, P. M, the snow falling rapidly, with the wind at the northwest, a vivid flash of lightning, unheralded by any previous indications of electricity, startled the inhabitants of the city of Syracuse and its vicinity; nor was their surprise diminished by the tremendous explosion which followed, like the discharge of a hundred cannon in the clouds, succeeded by a prolonged roll away towards the horizon, and ending into a swell which shook the ground like an earthquake. Probably not in ten years, at any season, has there been experienced by those who were observant of this discharge, a thunder-clap exceeding or equalling its intensity. Not the least singular circumstance attending it, was the fact that no thunder was heard after. It had been raining about an hour and a half previously, but a quarter of an hour before, the rain had changed into snow, which continued to fall heavily during the remainder of the day.

Another Balloon Ascention.

Mons. Victor Verdale made another ascension in his balloon at New Orleans on the 18th inst., without the usual car and suspended from the lower part of the balloon by his feet. The ascent was made from Congo Square, and a vast number of people were congregated in and around the place to witness the affair.—Everything went off well, the balloon included, and the æronaut rose to a considerable height, passing over the city, and at the corner of Perdido and Baroane streets, the machine descended and was safely secured. Verdale is becoming quite famous.

New Iron Company.

A company has been formed at Hudson, with a capital of $125,000, to erect a furnace and engage in the manufacture of iron. Mr. Charles Alzer of Stockbridge, Mass., is the principal stockholder.

Macaulay and his Orthography.

Mr. Macaulay has addressed the following letter to the Messrs. Harper in reference to the spelling used in their edition of his history.

GENTLEMEN: The copy of my history, which you were so good as to send, has this day reached me. I can as yet only judge of the general effect of the paper and typography; and that effect is highly creditable to your house.

The spelling differs from mine. But the difference does not affect either the substance or the style of my work; and I therefore do not consider myself as personally aggrieved by the change. If my sentiments were suppressed, or my language altered, I should think I had a right to complain. But, as to the spelling, I have no wish, except that it may be such as is generally acceptable to the American readers. T. R. MACAULAY.

Now this letter will surely set all our small linguists a sneezing. It will not settle the controversy however, because it has nothing to do with the question. The question is this simply. "Is it right to give to the public a work in the name of an author, with an orthography different from his?" We care about the sense alone, but we think it breathes of Anglo Saxon freedom to allow every author to appear in his own spelling whether it is fonografy or orthography.

The spelling however has nothing to do with the merits of a book—that is altogether a different question.

Antediluvian Rhinoceros.

M. Brandt, a zoologist, has published some microscopical observations upon the remains of food found by him in the cavities of the teeth of an antediluvian rhinoceros of which the museum of St. Petersburg possesses an entire cranium covered with the skin. From these researches it appears, that this species of animal fed upon the leaves and fruits of fir-trees; and it must in consequence, be supposed, that those great fossils found in the arctic regions of the ancient continent had never lived in a tropical climate. The tufted hair with which these were covered, and the examples of mammoths found standing, lead us to think that these species really lived where their remains are now found, and that all the geological hypotheses relative to the sudden changes of temperature in the districts inhabited formerly by these animals, and to the inundations by which their remains were transported from their primitive country, must be received with some caution.

Great Explosion at Allegany, Pa.

The boiler that exploded at the factory of Messrs. Fife, by which five persons are said to have lost their lives, is a sad affair. The boiler was thrown to a considerable distance from its resting-place, both heads were blown entirely out—one driven east, the other west—3000 feet or more apart. The boiler was a large cylinder of 36 inches diameter, and is said to have before exploded on a steamboat.—It is the opinion of engineers, however, that the accident was the result not of defect in the metal, but of deficiency of water—generating combustible explosive gas. The engineer escaped

Pennsylvania Coal Bushel.

The Legislature of Pennsylvania has just passed an act establishing a measure of bituminous coal, the bushel of which shall be 2688 cubic inches—or in other words—five pecks of the Winchester, or common grain measure. This was greatly needed by suppliers and consumers of coal, as no rule existed heretofore for its measurement but the indefinite one of the Winchester bushel heaped.

Calvin's Church at Geneva.

A traveller in Switzerland writes from Geneva, "that the old Gothic church where Calvin preached—the very sound-board which re-echoed the discussions of the Catholic monks with the reformers, is still in a green old age. It is now the principal church in Geneva, and 12 pastors of the city officiate in its pulpit by turns.

The mines discovered by the Mormons near Salt Lake, in the Rocky Mountains, prove to be copper and lead, instead of gold, as at first reported.

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For the Scientific American.

The Mineralogist.—The description and locality of every important Mineral in the United States.

(*Continued.*)

COPPER, NATIVE.

Occurs amorphous, kidney-shaped, hair-like and tree-like; also in crystals of 6 or 8 sides. Color, copper red, externally tarnished brownish black. Malleable. Specific gravity 8.5. Dissolves in acids; fusible. It is found near Lake Superior in great abundance; also in Deerfield, Mass., Hamden Hills, Bristol, West Hartford, and 12 miles from New Haven, Ct.; Schuyler's mine, and Woodbridge, N. J.; Adams Co. Pa.; Blue Ridge, Md.; Orange Co. Va.; Monroe Co. Ill.

FERRUGINOUS SUBPHURET OF COPPER (COPPER PYRITES.)

Occurs amorphous, crystallized, tree-like, icicle-form, and in concretions, with a brazen yellow color and metallic lustre. Capable of being cleaved into regular and parallel plates. Yields to the knife. Fusible. Heated with borax, it gives a greenish glass. Specific gravity 4.3. Localities: Brighton, Cambridge, and Woburn, Mass.; Farmington, Simsbury, Cheshire and Granby, Ct.; on the Hudson, N. Y.; Chester and Perkiomen lead mine, Pa.—Most of the copper used in the arts is obtained from the ore.

WHITE COPPER.

Occurs massive and here and there imbedded in a mass of another substance. Fine grained. Brittle. Color, nearly resembling silver white; soon tarnishes. Fusible, giving off a garlic odor. Specific gravity 4.5. Fairfield, Ct.

BLUE CARBONATE OF COPPER.

Occurs massive, disseminated, icicle-form, crystallized, and incrusting. Dissolves with effervesence in aqua fortis. Fusible with borax. Found in Hartford, Ct.; Schuyler's mine N. J., and Perkiomen lead mine, Pa. It is often used as a pigment under the name of "mountain blue."

MURIATE OE COPPER.

Occurs in 8 sided crystals; also in plates and concretions. Brittle. Color green; lustre, shining. Translucent. Gives bright blue colors to the flame of a candle; melts before the blow-pipe. Soluble in aquafortis. Specific gravity 3.52 to 4.4. It is found in the towns of Brighton, Woburn and Medford, Mass.

CORUNDUM (ADAMANTINE SPAR.)

Occurs crystalline and massive with a green, greyish green, bluish, reddish, yellowish, brownish or whitish color, and shining lustre. Extremely hard. Infusible, except by the oxy-hydrogen blow-pipe. Specific gravity about 4. It is found in Litchfield, Ct.; Newton, N. J.; Warwick, N. Y.; and Laurens District, S. C. Employed in polishing.

CRICHTONITE.

Occurs in crystals of a velvet black color. Infusible. Scratches carbonate of lime, but not glass. Specific gravity 4.66. Found in Washington, Ct., in a quartz vein; in Amity, N. Y., in white limestone and serpentine.

CUMMINGTONITE.

Occurs massive, the composition thin, columnar, stellular, scapiform, rather incoherent; color, ash grey; translucent to opaque; brittle; lustre, silky; fibres. somewhat curved. Infusible, but with borax. It is found in Cummington and Plainfield, Hampshire Co. Mass.

CYANITE (KYANITE.)

Usually occurs in long, thin, blade-like crystals, of a clear blue or bluish white color, and pearly lustre. Scratches glass; yields a little to the knife. Infusible, but turns whitish.—Specific gravity 3.50. Occurs at Litchfield, Middle Haddam, Harwinton, and near New Haven, Ct.; Chesterfield, Granville, Conway, Plainfield and Deerfield, Mass.; Bellows Falls, Grafton and Norwich, Vt.; Orford, N. H.; Chester Co., Delaware Co., East Bradford and East Marlborough, Pa; also, in Maryland and North Carolina.

DEWEYLITE.

Occurs massive, of an impalpable composition, glassy lustre, rough surface, and a white, yellowish, or greenish white color.—When heated, it decripitates, and melts into a white enamel; but with borax, into a colorless glass. It is twice as heavy as water. Found at Middlefield, Mass.: Amity, N. Y.; and at Cooptown, Md.

DIALLAGE, GREEN (SMARAGDITE.)

Occurs massive, and also imbedded in other substances, having a pearly lustre, foliated structure, green color, and a weight thrice that of water. Fuses with difficulty. Found in a greenish rock at New Haven, Ct.; at Crown Point, N. Y.

DIALLAGE, METALLOIDAL.

Occurs massive, with a green, metallic grey, brownish, or nearly white color, metallic lustre, and a specific gravity of 3. Consists of plates, often curved. Fuses with difficulty into a blackish enamel. It is found in Middlefield, Mass., and near Haverstraw Bay N. Y.

DIOPSIDE (MUSSITE)

Occurs crystallized, translucent or transparent; often compressed into tables; of a foliated structure; glassy lustre, and of a clear grayish green color. Scratches glass. Fusible with difficulty into a grayish limpid glass. Specific gravity from 3.23 to 3.30. Found in Bolton, Mass.; Phillipstown, N. Y.; and Pennsborough, Pa.

Sheep Husbandry.

The following is a statement of a grand project in the raising of sheep by Henry Ancrum Esq. Ashley, Pike County, Missouri.

He says "I possess one of the finest situations for carrying out a grand national scheme of sheep raising, that is to be found in the United States. The climate in this part of Missouri is very favorable to the sheep. I propose to obtain from my knowledge of the business, the following results. 1st. To add at least two years to the life of the sheep. 2d. To economise by management 20 per cent. 3d. To economise the profits by increasing the amount of wool clipped on each sheep, and also to increase the quality of the wool. I have studied all the branches of science connected with sheep, Botany, Nutrition, Anatomy, &c. I have had 20 years experience in Europe and 8 years in America, and have travelled over France where Merino sheep abound to study their management, and I have ransacked Europe and the United States for every system that could add a single perfection to my mass of practical knowledge. I wish to induce men of great and small capital to embark in this scheme, and to show what has been done and is doing in other countries, in the same profitable line I present the following condensed extract.

In 1817 Australia only produced 240 pounds of wool; in 1829 there were raised in it no less than 10,127,000 pounds of wool, making a return to England of one million sterling. A company in London named "The Australian Company for raising fine wool," had in 1833 31,000 sheep beside cattle, and this number is now vastly increased. This company is conducted on a very expensive scale but for all that it makes great profits. The sheep are raised 4 months voyage from England—where the stockholders reside They have secretaries and directors kept up at great expense and the superintendant Col. Dunairish, receives a salary of $3,700 per annum and at one time Capt. Parry the North Pole navigator received for seven years a salary of £2000 per annum. Notwithstanding all these expences, that Company's profits have been tremendous. What is to hinder us from making far greater profits? Nothing. We only want a large company to carry out the scheme. Our land is cheaper and I can manage them at less expense than they possibly are able to do in Australia or at the Cape of Good Hope. If English Capitalists keep farms at the Cape and in Austrilia and make great profits, surely we can make larger profits in Missouri where we have good soil and a good climate. All that I want to do this, is the assistance of capitalists to create, first the flocks and establish the system according to the plans, which are known to me from experience to be the best. Who will engage in this National Enterprize?

HENRY ANCRUM.

Tart words make no friends; a spoonful of honey will catch more flies than a gallon of vinegar.

All young people should avoid the use of slang words and phrases both in speaking and writing.

An old advice and good one is "prevention is better than cure."

The Cholera.—Its Treatment and Cure.

The following splendid article on the treatment of Cholera, was furnished to our Minister at the Court of Russia, by request. The author of it is Dr. Rogers, who is a native of, and was educated at the first Scottish Universities, and is one of the most eminent physicians at St. Petersburg. At the present moment too much light cannot be thrown upon this subject, and it is highly creditable to our Minister in Russia, Hon. A. P. Bagby, that he has acquired such information and from such a source, and sent it home for the benefit of his native country, which apparently is threatened again with this scourge.

"The substance of all that is known respecting the prevention and treatment of cholera may be easily condensed, for popular use in a very small space. As no very successful method of treating cholera has yet been discovered, it becomes an object of the utmost importance to prevent the occurrence of the disease; and it is satisfactory to know that we possess means, by the use of which we can diminish very much the liability to its attacks. In proportion to the virulence with which the poison of cholera is developed in a locality, every person residing there is more or less under the influence. When it is highly developed, the slightest irritation of the intestinal canal is sufficient to bring on an attack of the disease. Although it may be generally said that by adopting proper precaution we may enjoy comparative immunity from attacks of the disease, yet occasionally the system is so susceptible of the action of the poison that the disease occurs even in cases where every reasonable precaution has been adopted. The general direction relative to cholera may be referred to two heads: First those which regard the prevention of the disease: and, second, those which relate to the treatment till medical aid can be procured.

1. It is of the utmost importance to avoid whatever tends to chill the body, such as exposure to cold, or to diminish the energies of the system, whether the cause be physical or moral, such as insufficient sleep or insufficient nourishment, depressing feelings, such as fear, &c. To avoid the use of all uncooked vegetables, as salad and cucumbers. When the epidemic is prevalent in a locality, the use even of cooked vegetables has often been the exciting cause of the disease. The use of fruit, nuts, raisins, cheese, smoked and salt provisions, pork, pastry, &c., is very injurious. Cold drinks, ices, and vinous drinks should be avoided. Curds, whey, milk if it generally disagrees with the individual, should be abstained from. Purgative medicine should be used with the greatest circumspection during the prevalence of the epidemic, and never, if possible, without the advice of a medical man; and even when employed, they should be of the mildest kind, such as calcined magnesia, castor oil, or rhubarb. The use of saline purgatives should be completely abandoned. It is not to be forgotten that the smallest doses of purgative medicine often act with great violence during the prevalence of the cholera.

2. One of the first means to be employed is a sinapism over the whole abdomen, which can be repeated according to circumstances. Sinapism should also be applied to the legs and arms, and to some part of the spine, particularly any part of it which may be painful. At the commencement of the attack 10 to 15 drops of Sydenham's laudanum are to be given in a small cupfull of peppermint tea, with a small quantity of brandy. If the draught be rejected by vomiting it can be repeated.—When the disease is advancing towards the stage of collapse, or if it be already at the stage, 30 to 60 drops of the subjoined drops can be given every half hour, according to the degree of prostration of the strength of the patient. Bags filled with heated sand or salt or bran should be wrapped around the extremities and applied along the body, in order to keep up the heat of the surface, and thereby to give more energy to the circulation of the blood in the skin The patient should be kept well covered up so as to produce, if possible, a warm perspiration. If this can be accomplished, the danger of the disease is already much diminished; and it is frequently a satisfactory sign that the energy of the system is sufficient to throw off the disease. To remove the cramp friction, with any strong liniment, the one made according to the subjoined receipt can be employed. The application of sinapisms to the affected limbs and the vapor bath are of great service. Small morsels of ice allowed to dissolve in the mouth tend to lessen the thirst and sickness and to stop the vomiting. Such are the principal means which may be employed until medical advice can be procured. As a summary of precautionary measures, I should say keep the body warm, avoid the use of indigestible food, especially whatever has been found habitually to disagree with the individual; use plain soup, roast beef, or stake or muttonchop."

I. DROPS.

R—Tinct: Valerianae æther: 1 oz.
Æther: sulphurici alcoh.
Essent. menth: peppert: āā ½ oz.
S—30 to 60 drops in a little water for a dose.

II. LINIMENT.

R—Tinct: capsici
Lini: opodeldoc: āā 6 oz.
S—For friction.

Liebig When a Boy.

Liebig was distinguished at school as "booby," the only talent then cultivated in German schools being verbal memory. On one occasion, being sneeringly asked by the master what he proposed to become, since he was so bad a scholar, and answering he would be a chemist, the whole school burst into a laugh of derison. Not long ago, Liebig saw his old school master, who feelingly lamented his own former blindness. The only boy in the same school who ever disputed with Liebig the station of "booby" was one who never could learn his lesson by heart, but was continually composing music, and writing it down by stealth in school. This same individual Liebig lately found at Vienna, distinguished as a composer, and conductor of the Imperial Opera House. His name is Reuling. It is to be hoped that a more rational system of school instruction is now gaining ground. Can anything be more absurd and detestable than a system which made Walter Scott and Justus Liebig "boobies" at school, and so effectually concealed their natural talents, that, for example, Liebig was often lectured before the whole school on his being sure to cause misery and broken hearts to his parents, while he was all the time conscious, as the above anecdote proves, of the possession of talents similar in kind to those he has since displayed.

Artesian Wells in London.

The sanitory regulation now contemplated will, when carried into operation, place the using of Thames water for domestic purposes entirely out of the question; and other means of supplying the public must be resorted to. An association has been formed to make artesian wells sufficient to supply the whole of London with pure water. The calculation is that there are at present more than 60,000 houses, containing a population of nearly half a million of persons, who are not supplied with wholesome water. The cost of water to be supplied by these wells will not exceed 8s. per year for each house. The water of these wells will be supplied by boring into the chalk formation below the sand-bed under the plastic or London clay, where an unfailing supply would be found. The practicability of this scheme has been proved by the borings at Trafalgar Square, where two wells have supplied the fountains there for four or five years and by the well at the Camden station of the Northwestern Railroad Company, where, at the depth of 140 feet, a supply of water was found sufficient for all the purposes of that immense establishment.

Maxims.

Persevere against discouragements. Keep your temper. Employ leisure in study, and always have some work in hand. Be punctual and methodical in business, and never procrastinate. Never be in a hurry. Preserve self-possession, and be not talked out of a conviction. Rise early, and be an economist of time. Maintain dignity without the appearance of pride; manner is something with every body, and everything with some. Be guarded in discourse, attentive, and slow to speak. Never acquiesce in immoral or pernicious opinions. Be not forward to assign reasons to those who have no right to ask. Think nothing in conduct unimportant and indifferent. Practise strict temperance.

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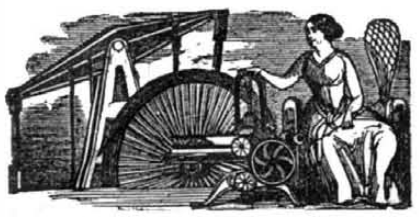


New Inventions.

New Plan of Ærial and Terra Firma Locomotion.

Mr. Franklin Kelsey, of Middletown, Ct., has sent us a drawing and description of a new mode of traversing over the hills and the valleys away to distant lands by a combined celestial and terrestrial apparatus. His plan is to erect a wire or other rope on elevated posts, like our telegraph wires—and to have the rope or wires pass over pulleys like an endless apron and to have an inflated balloon and carriage attached to the endless rope to buoy up the car,—the same to be propelled by a steam engine. It is simply an elevated railway combined with a balloon, operated in the mode of the cars on steep inclines. There is a great deal of ingenuity expended at present to construct ærial ships and bring about some feasible plan of ærial navigation.

Machine for Turning Irregular Forms.

Mr. Allen Goodman, of Dana, Mass., has made some improvements on machinery for turning irregular forms, for which he has applied for a patent, and which promises to be valuable. The design of it is principally to turn ornamented pillars for furniture, &c. He employs the same motion as the common lathe, and the cutter is operated in the same way—using a slide rest, but which is guided by cam patterns on a vertical revolving shaft. A number of patterns are used on the same shaft and the shaft can be shifted up and down, bringing any of the patterns to guide the cutters at any moment, so as to change or induce modified designs to be turned on the same pillar, or other piece of ornamental furniture.

Improved Mortising Machine.

Mr. John C. Macomber, of Plymouth, Wayne County, Michigan, has applied for a patent on an improved Morticing Machine, which by the manner the cutters are combined with tension springs, and the manner of regulating the tension of the springs, enable the cutters to be operated by a reciprocating motion so easily regulated by the operative, that he can cut the most delicate chip that may be required to make a correct mortise, with an accuracy not surpassed by the most careful handiwork.

New Invention.

Mr. Hiram C. Brown, of Xenia, Ohio, an excellent mechanic, has invented a very useful machine for raising brick, mortar and other substances to any required height, thus saving a vast amount of laborious work. We might mention several other novel inventions originated by him. He has recently obtained letters patent for an improved Weather Strip for doors, &c.

New Invention in Baking.

The Glasgow Citizen (Scotch Paper,) says that a machine has been invented in that city which both kneads the dough and moulds the loaves into the required shape, ready for the oven. One machine not quite a yard in length and 18 inches in breadth, by the attendance of one man accomplished as much work as five bakers, and the bread was of the best quality. The Citizen also says—but we are doubtful of its correctness—that "by a new and original process of mixing and kneading, which can be done either with or without barm (yeast) the usual loss of weight attributed to evaporation in 'raising the sponge' is avoided, and a great saving of flour, as well as time and labor is effected."

[Were it not for the statement "time and labor" is saved by the latter process, we should have supposed that it was the French mode of making bread, but it takes more time and labor to make, than by the processes now employed among our bakers.

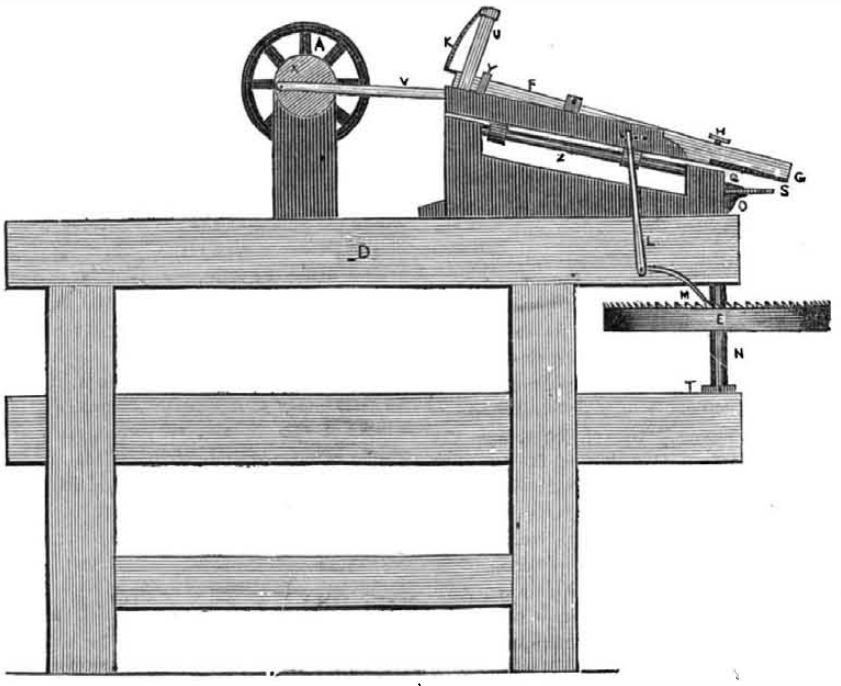
The progress of invention is onward. The discoveries of the future must eclipse those of the past.

New Copying Printing Press.

The Baltimore American says: "We had recently the pleasure of examining a small but very ingenious machine, recently invented by our Townsman, Mr. Oliver T. Eddy, which promises when perfected, to be of very great utility. It is an instrument which will print, with almost the perfection of an ordinary printing press, a single copy of any document, and with about the same rapidity as the document can be transcribed by a good penman—the copying done by the machine, being of course, more plain and more easily read. Mr. Eddy designs to offer the use of this invention to the Departments of Washington, and if they are found serviceable there, to place them in the various Record offices, and wherever copies of documents are wanted to be made with accuracy and plainness. They are played on, as it were, striking keys answering to the letters of the alphabet, and the response is the instantaneous impression on the sheet.

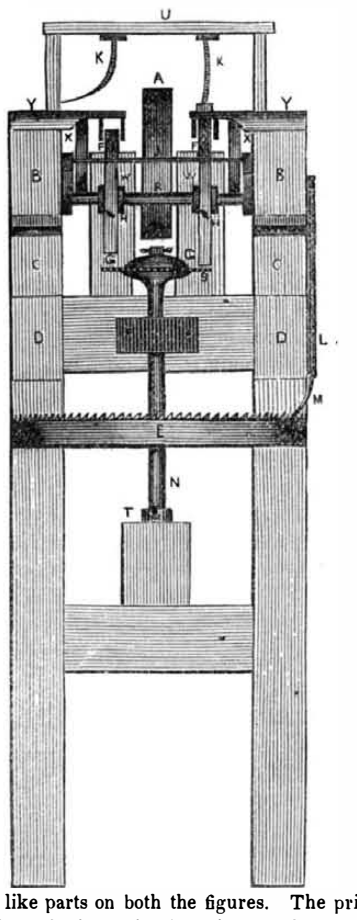
[We do not believe that any printing machine operated by keys can transcribe as fast as a good penman It may print plainer than a pen, but it appears to us, that the pen can be made to travel over a whole word while the hand is changing from one key to another. There may however, be something about the above press which removes all objections.

BROWN'S CIRCULAR SAW FILING MACHINE.---Figure 1.



This machine is the invention of Mr. Israel F. Brown of Columbus, Georgia. No small degree of interest has been manifested to know something about this machine, as accounts have found their way far and near, relative to its excellence for the purpose intended. It is especially designed for the saws of the cotton gin, and the following description will convey plainly a knowledge of its principle and operation. Fig. 1, is a side elevation, and Fig. 2 an end elevation. The same letters refer to the like parts on both the figures. The principle of the invention is to sharpen the saw by a file moved by a reciprocating horizontal motion operating alternately upon each tooth of the circular saw, which is moved round on a vertical spindle under the file.

FIG 2.



DESCRIPTION.—D, is a frame or table. A, is a power wheel to drive the machine. B, is a sliding frame . C, is an incline frame with upraised ends into which is fixed the guide bar or rod Z, on which the frame B, is secured and slides by the clasps seen embracing Z. F, is a reciprocating bar fixed on the top of the inclined slide, and G is the angular file secured under this bar to sharpen the saw. The file passes through a loop below which is screwed firm up by the nut H. The file in its bar is moved up and down the incline by V, a connecting rod secured to the drum X eccentrically, or a crank will answer the same purpose, to give the file a reciprocating motion, as the wheel A is moved round. S, is the small saw to be sharpened, it is placed upon a vertical shaft N, which revolves in proper boxes T. The saw to be sharpened is set upon a disc O, on the shaft, and secured by a screw cap or bonnet above, which is easily put on or taken off. It requires but a moment to shift the saw. Every revolution of A makes the file give one rasp to the saw and the saw is moved one tooth during every revolution at the same time. The saw therefore has an intermittent circular motion and the file an inclined reciprocating motion. The saw is held to receive the action of the file, by a ratchet wheel E, on the same shaft. This ratchet wheel is operated by a ratchet M, on a vibrating rod L, the top of which is operated by the reciprocating motion of B, as will be perceived. The ratchet wheel E, by the ratchet holds the saw S, to receive the action of the file G, on the tangential edges of the saw teeth, during the file's forward motion, but a backward motion of the file would injure the curved edge of the saw teeth were it allowed to touch the saw. This is obviated by a spring K, attached to the end of the file bar and an upright U, which lifts up the file above the saw on its return motion The file must be set on the frame to sharpen the teeth on such a line as to file the teeth, as will strike only the tangential line of each tooth. This machine may be driven by any kind of power.—Its utility is self-evident, and it is of no small value. Measures have been taken by the inventor to secure letters patent.

Steam Guage.

The St. Louis Republican notices the invention of a steam guage by A. S. Lyman, and says: "This guage, although separated from the boiler room, yet with the doors shut, and without any intimation or knowledge without, any one may understand when the fire doors are open—when fresh fuel is added—when the pump is keeping up a supply of water, and every cut off of the steam made by each revolution of the engine All this is shown upon a plate, like the plate of the thermometer, graduated and marked by degrees and figures, and reduced to a scale which shows the exact weight of steam carried—and the precise condition of the water in the boiler. The index mercury rises as the pressure of the steam increases, and the index mercury for the water rises as soon as the water falls too low in the boiler. In either case, the effect is the same on one or the other of the indexes. If either go to a point beyond that of safety, or to a point which is usually esteemed unsafe by men conversant with the subject, the guage is so constructed that as soon as it reaches that point whether from the high pressure of steam or the low state of the water in the boiler, it throws a connected piece of machinery into operation and gives instantaneous alarm to all in the vicinity. It has been partially introduced upon several boats with the most decided success.

[Is not this the common mercury guage with its qualities a little exagerated. Wherein consists the difference?

The qualities ascribed to it are certainly great. It is just the the thing wanted to prevent explosions, which have been very frequent lately. On the 26th ult. at Allegany, opposite Pittsburg, a boiler bursted by which a number of lives were lost and 5 buildings destroyed. The cause of steam boiler explosions does not appear to be a problem, but the preventing of explosions seems to be. If Mr. Lyman's guage can perform all that it is represented to do, the problem of *prevention* is at once solved.

Discovery to Restore Decaying Ivory.

Mr. Layard, in his recent explorations among the ruins of famous old Nineveh, discovered many ornaments of glass, which shows that the ancients, far anterior to our knowledge of its discovery, were acquainted with the process of making it. Among many wonderful discoveries made in the ruins, Mr. Layard exhumed some splendid works of art, carved in ivory. When the ivory arrived in England, it was discovered that it would crumble to pieces and fall into dust. Prof. Owen attributed the cause of decay to the departure of the albumen from the ivory and recommended the articles to be boiled in an albumen solution. The experiment was tried with the most happy results. The old ivory has been thereby rendered as firm and solid as when it was entombed, and the probability is that these splendid works of ancient Assyrian civilization will astonish future generations a thousand years hence.

Animal Electricity.

The London Sun says that Mr. Alfred Smee, the surgeon to the Bank of England, and inventor of the battery which bears his name, has announced important discoveries in animal electricity.

By a test which he terms electro voltaic, he has discovered that the termination of the sensor nerves are positive poles of a voltaic circuit, whilst the muscular substance is the negative pole. The sensor nerves are the telegraphs which carry the sensation to the brain and the motor nerves carry back the volition to the muscles. The brain he infers to consist of five distinct voltaic circles, which upon theoretical grounds; he believes to be sufficient to account for all mental phenomena. Mr. Smee has succeeded in making artificial electric fish, and artificial muscular substance.—Should these researches be fully confirmed by other investigators, they must be regarded as the most important physiological discovery of modern times.

The above must be received with some caution. The idea that the brain is an electric battery, is not new however.

Tunnelling a River.

The citizens of Chicago are agitating the project of tunnelling the river at that place. The bridges have been so often carried away, that they think a tunnel will be cheaper in the end than to re-construct the bridges carried away by the late flood, without making provision for their future permanency.

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NEW YORK, APRIL 7, 1849.

Facts and Fallacies.

Plausible fallacies are being brought constantly before the public as things wonderful, important and new. Exploded theories are continually re-resolving into fanciful or promising speculations. Submerged projects are frequently thrown upon the surface of the tide to float awhile on its bosom, to allure and deceive. At the present moment at no great distance from this city, a perpetual motion has been discovered—a self-moving machine that is to astonish this before bedarkened planet. The castings are now in the machine shop finishing up for the final triumph of man's genius, over the sneers and doubts and fears of all unbelievers. A small machine of about five horse power is to be built and five hundred dollars to be expended—sacrificed—all for the lack of reading the "Principia," and studying the "laws of motion." If people would just bear in mind, that "action must be equal and contrary to re-action, that every body must persevere in a state of rest or of uniform motion in *a straight line*, unless compelled to change that state by forces impressed upon it, and that every change of motion must be proportioned to the impressed force," we would not hear of so many ingenious mistakes committed by many men who otherwise possess mechanical genius and skill.

Within the past year France has boasted of two new engines moved by a power that is to supersede steam and astonish us Yankees.—One is an Ether-propelled Engine, and the other a Steam and Chloroform Engine. Now if these engines can be propelled at less expense than our steam engines, this is just the country for them—we are just the people that like thiags cheap and good, because the majority reap the benefits, and as soon as it can be fairly demonstrated to us, that ether, chloroform, gas, gunpowder, or gun cotton, will propel an engine at less expense than the vapor of water, it will not be long till we pitch our steam pokers among the wrecks of "rusty iron caps and jingling jackets." But until this is done, our judgment leads us to say, "guess we'll wait a little longer, till we see what comes out on't." In 1822 Brown invented a gas vapor engine, and in 1826, Howard invented an alcohol and ether engine, and in the same year, M. de Montgery of Paris, invented an engine to be propelled by bituminous vapour, and Cheverton about the same time, after rejecting gunpowder fixed on oil gas as the grand panacea for all the evils complained of in the steam engine. In 1840 Col. Torrens constructed an engine to be propelled either by condensed sulphuretted hydrogen or by nitrous oxide liquor, which was to obviate all the difficulties experienced by Brunel in constructing vessels to propel machinery by carbonic acid gas. In 1827 Messrs. Stirling, of Glasgow, invented a hot air engine, and two others have been invented since to be propelled by the same power. Stirling's engine is yet in operation which says not a little for the merits of the invention, but all the others mentioned are numbered with the things that were. Although alcohol and ether will become vapor with less than one half the degree of heat required to raise water to vapor, yet owing to their difference in gravity, a pound of water will evaporate to 4 times the bulk of a pound of ether. Those who would construct new engines should be acquainted with the laws that govern the materials which they design to employ, and the relative action produced by the application and combination of those materials. If men would study the simple properties of the lever, and the laws of motion (which embrace friction,) we would hear no more of self moving machines. And if men would study the chemical properties of fluids capable of expansion by heat, there would be fewer revamped gas engines; and if we would have no more facts than we now have, we would assuredly have less fallacies.

Railroads and Locomotives.

The first Railways that we have any satisfactory account of, were employed about the middle of the 17th century, in the neighborhood of Newcastle, England. They were made of timber, laid down on transverse sleepers, which were placed at right angles to the track, at about 30 inches apart. The space between the two rails was a horse path. The rails were fastened with wooden spikes, which were planed off smooth. The wagons drawn on these roads were made with flange wheels, like those now in general use. These first rails were named "the edge rails." Another kind was introduced into Wales and some parts of England in 1770. It was named "the tram rail." These rails had flanges or shoulders, and the carriages used on them had none. For drawing heavy loads, such as in the mining districts, they were preferred to the edge rail, as the speed was no great object, but the loading and unloading, hence the wagons were built with but small wheels, and therefore had low bodies.

The first malleable iron railway that was constructed, so far as we have been able to discover, was one constructed at the Hurlet, near Glasgow, Scotland. Cast iron rails, however, had been used previously in England.—This malleable iron railroad was a very solid structure, and the wagons used on it carried very heavy loads. It only wanted the steam engine then to perfect the system.

The first locomotive patented, we believe, was that of Messrs. Trevethick and Vivian, in 1802 These engineers constructed a locomotive in 1804, and tried it on the Merthyr Tydvil railroad in Wales. This was the *alma mater* of locomotives, as it was a high pressure, using a horizontal boiler and had a tube and return flue. Trevethick was a very ingenious Welsh engineer and too little credit has been awarded him for his inventions, although the Trevethick Valve bears its name on its frontlet. The first locomotive was made with driving wheels which had rough surfaces it being the common belief then, that smooth wheels would only spin round on an iron rail when propelled by a force inside of its periphery.

In 1804 Oliver Evans submitted a plan to the "Lancaster Turnpike Company, Pa." to construct a steam carriage to draw wagons on that road at the rate of 50 miles in one day, and in 1805 he published a book describing the whole system. Evans in America, and Trevethick in England, invented and constructed high pressure engines about the same period. There could be no plagiarism in either case, both were original inventors—both were men of uncommon mechanical genius. In 1812 a Mr. Davis in Boston, endeavored to induce some Boston capitalists to build an iron railroad, for which he would construct a steam engine to propel carriages on it. They laughed at him then, but they know better now.—At that time, however, Oliver Evans, while residing at Ellicott's Mills, Md., offered to build an engine that would run 15 miles an hour on a railroad.

In 1814 Mr. George Stephenson the celebrated Mechanic, not long since deceased, constructed a locomotive which was worked by two cylinders, and the driving cranks were placed at right angles to one another. This engine was only used for drawing coals. Roads and locomotives made but little progress prior to 1826, although Mr. James invented an engine to ascend inclines in 1824, and to this engineer, a Manchester gentleman we believe, belongs the credit of proposing and planning the great railway between Manchester and Liverpool, where the first successful experiment of railway travelling was made. This was on the 8th of October 1829, a day never to be forgotton, when Mr. Robert Stephenson the son of George, started with his engine, the Rocket, and performed at the rate of 35 miles per hour on one trip. From the 8th day of October 1829, all doubts of the success of railway travelling disappeared, and during the years that have elapsed since then, the progress of railways "all the world over" has been so rapid and extensive, that the mind, when taking a retrospective glance, is almost bedizzened with the magnificence of the prospect spread out before it.

Ten years ago, the hoof of the iron courser had not broken the silence of a glen in the Green Mountains, now its thunder rolls daily through their chisel cleft adamantine sides; and leaping over the Hudson the smoke of his nostrils may be seen streaming up the valley of the Mohawk—and away through the wilds and the woods of Illinois and Michigan—aye and in a few years more "the shepherd standing on some tall cliff of the rocky monntains, will see it beneath him

Like a silvery veil
Swept by the gale,"

careering and curling along to the verge of the boundless Pacific.

Controversy on Electro Magnetic Clocks.

The following letter has been addressed by Prof. Bond to the Boston Traveller.

"I noticed a statement in the Transcript of yesterday, copied from the Baltimore American, under the head of "Electro Magnetic Chronograph," that ten thousand dollars have been appropriated by Congress to Professor Locke, of Cincinnati, to pay him for the use of his late invention by the Government of the United States, (not, however, to make it free to individuals,) and for a clock upon his plan to be erected by him at the National Observatory."

Is there not some mistake in this matter? The brief history of this "Chronograph," is as follows:

Last summer I was engaged at the request of the Superintendant of the United States Coast Survey, in a course of Magneto-Telegraphic operations connecting the Observatory at Cambridge with New-York. It was thought our methods were susceptible of improvements; and I proposed to Dr. Bache to make the beats of our sideral clock audible in New-York, Washington, Cincinnati, &c., by insulating certain parts of the machinery and making the escapement itself to break-circuit key of the Telegraph wires I made a drawing of my plan, and Dr. Bache, the Superintendant of the Coast Survey, after satisfying himself of its practicability, engaged me to prepare a clock for the use of the Survey on this plan, to be ready when we should resume Telegraphic operations, about May or June, 1849. Mr. Sears C. Walker was present when this arrangement was made between Dr. Bache and myself. Mr. Walker, a month or two after, went to Cincinnati, and informed Dr. Locke of what I had done. Up to this moment it appears that the subject was new to Dr. Locke. He then suggested an alteration, by no means an improvement in the plan proposed by me, and under this form claimed the invention of the Magnetic Clock.

If, then, there be no mistake in the article copied by the Transcript from the Baltimore American, must I ask leave of Dr. Locke to use my own invention, to enable me to fulfil a contract made long before he, Dr. L., had turned his attention to the subject?

W. C. Bond.

Observatory at Cambridge, March 16.

Mr. Walker's report of the Electro Magnetic Clock, is published in the last number of Silliman's Journal. We corrected an erroneous part of that report before, viz. his crediting Prof. Wheatstone with the first discovery of the clock. The inventor of the Electro Magnetic Clock is Mr. A. Bain. He has a patent for it in England, but it is public property here. This is one benefit which that man has conferred upon our country. A full description and drawings of this clock was published in 1842, but patented in 1841. To those who may be doubtful of what we say, we refer them to page 55, Vol. 3 of the Practical Mechanic and Engineers Magazine. We allude to this at present because some people may be led astray from the real facts of the case, as Silliman's Journal has a justly solid character. It does not endorse Mr. Walker's statements, but some people think that everything which appears in a journal or paper, is fully endorsed by the editor.

We express no opinion about this controversy. Probably Mr. Locke can throw a different version on the affair. Mr. Bain's Clock did not register, we believe, only signalled time to a number of places. Its application to astronomy is new, as combined with the registering fillet, which makes it a very important invention.

American Inventions in England.

We perceive that the patent of Mr. Bentz's Unbranning Machine, and West & Thompson's Clasp Coupling Joint, have been enrolled in the London Patent Office. The Coupling Joint has been at once introduced into the engineering establishments of London and those in other parts of England. This is an invention which from all appearances, will soon enrich its inventors.

Scientific Memoranda.---Vocal Phenomenon.

A vocal phenomenon has just been announced in London. A Mr. Richmond, it is stated, possesses the wonderful power of producing two vocal sounds at a time—a modulated bass tone and almost instantly a treble accompaniment, and in perfect harmony. The treble tones are of the sweetest and most melodious character, far surpassing in softness any known musical instrument, or even "vocal organ of the bird!"

Scientific Bequest.

The Paris papers announce the decease of Mr. Moreton, an American, and it is stated that he has made a bequest, to the effect that two hundred thousand dollars shall be given to any person who shall succeed in constructing a machine capable of throwing off ten thousand copies of a newspaper in an hour!

[A press to do this must print 166 2-3 in a minute. We do not know but Hoe's press will take this legacy.

Southern Products.

The Savannah Georgian says:—The quantity of Upland Cotton shipped from the port of Savannah in the month of February 1849, exceeds the amount shipped in the corresponding month of 1848, by 6,321,563, lbs., of Sea Island 232,755 lbs., and of Rice 672 casks, and the aggregate value of exports of February, 1849, exceeds that of same time 1848, by $362,054. With such developement before us, who is there that calls himself a Georgian and can refuse all the aid in his power to render the only seaport in his State, what she is destined to be, the greatest commercial city in the Sonth.

Manufactures.

The steamer Columbus carried to Philadelphia, on her last passage, 280 bales of osnaburgs and yarn, manufactured in South Carolina.

On the 13th ult. meeting was held in Ruthford, North Carolina, for the purpose of taksome preliminary steps for the establishment of a Cotton Manufactory, at which the following resolutions were adopted:

Resolved, That it is expedient that a manufacturing company, with a capital of at least $10,000 be established in this county.

Resolved, That a committee of twelve persons be appointed to open books, at different places in the county of Rutherford, and to receive subscriptions to the stock of the company, at fifty dollars the share; which committee shall report the result of their labors to the meeting to be held on the 2d Monday in April.

Silver and Gold Mine.

There has been discovered in Benton county, Tenn., near Wyatt's Mill, a gold and silver mine. It it said that large amounts of silver and gold ore are found, unusually rich—yielding some 75 or 80 per cent. Considerable excitement prevails in that region—the owner of the land having it guarded day and night.

Back Volumes of the Scientific American.

A few more copies of complete sets of vol. 3 of the Scientific American may be had at the office, either bound or in sheets. Price neatly bound $2 75, in sheets suitable for mailing $2. Send in your orders early if you desire them filled for we have but a few more copies left, and the number is growing less every day.

Our London Patrons.

We are happy in being able to inform our English patrons that such arrangements have been completed with the London Patent Office that the Scientific American may hereafter be found there. Messrs. Barlow & Payne are agents at 89 Chancery Lane, and will receive remittances on account of the Scientific American from those who may desire to subscribe.

Terms—3 dollars per year and postage paid out of the United States.

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Francis Bacon.

(*Concluded.*)

As the author of original ideas in philosophy, which run counter to opinions entertained for centuries, Bacon had considerable difficulties to contend with in enunciating his doctrines. He seems, however, to have been aware of this, and in throwing new light upon science, sought rather to illumine than to dazzle, rather to awaken than to astonish the mind. Besides, he had sufficient tact to perceive that for successful promulgation of new opinions, it was necessary to establish a certain pre-eminence in the literary and scientific world: and this he effected by the publication of "The Wisdom of the Ancients," and other works on subjects allied to the spirit of his age.

In the year 1611, Bacon was a joint judge of the Knight Marshall's Court. In 1613, he was appointed attorney general, and elected a member of the privy council, and in regard to his great services was allowed to retain his place in the lower house. At this time his professional practice was great. The office of attorney general yielded £6000 per annum; as registrar of the Star Chamber he received £1600 per annum; he had a good estate in Hertfordshire, and his father's seat of Gorhambury, by the death of his brother; besides, he had the income of his wife's large fortune.

On the 7th of March, 1617, he was made lord keeper of the great seal, and on the 7th of May following, he took the office. Some political intrigues, and the use he made of the power conferred by this new office, in refusing to sanction the improvident grants of Buckingham, shook for a moment his stability at Court. Prudence, however, restablished his footing, and on the 4th of Jan. 1618, he was appointed lord high chancellor of England, and by letters patent dated 11th July, 1618, he was created baron Verulam, and took his seat among the peers. On the 19th of Nov. 1619, he got the farming of the alienation office. Next year he was made viscount St. Albans. In the beginning of 1620 he kept his birthday with great state; and his virtues were celebrated in verse according to the fashion of the day by Ben Johnson. Bacon chose this favorable moment for the publication of his "Organon." This work he had commenced in his early years, and amidst the the bustle of professional duties and the excitement of public life, he still went on for years, enlarging and improving, gathering experience in maturer years, and his opinions corrected or confirmed by extended research, and the opinions of the learned men of the day. Twelve times he is said to have re-written this great work, correcting and revising, and at last when occupying the highest position of power and learning in his native land, he launched it into the world to earn from posterity the title given to its first outline, "The Greatest Birth of Time."

The studies and efforts of Bacon were directed towards the clearing every branch of science from the scholastic rubbish which for centuries had gathered around them, marring their developement and application, and making the school of philosophy more the arena of unprofitable speculation and dispute, than the home of legitimate science. In his Norvum Organum, he points out the true method of studying science. Grasping within his own powerful mind the whole range of human knowledge known in his day, he investigates the relations of the various sciences, and attempts to arrange them according to what he understood as the faculties of the human mind. He divided the sciences into those of the memory, of the understanding, and of the imagination; and however imperfect this division is to be regarded at the present day, it betrayed an effort of no ordinary character, and tended greatly to facilitate the study of science. But the great merit of this work perhaps rests in laying down the important doctrine, that the only way to discover the truths of natural science, is by observation and experiment. But it was reserved for posterity to appreciate the genius displayed in the Norvum Organum. It was the product of a strong mind, matured by reflection, but too lofty and original in its conceptions to be appreciated even by the learned of that time. Accordingly, when issued to the world, although it commanded the commendations of a few philosophers whose minds could comprehend its truth and value, it was assailed by the grossest and the keenest ridicule of the wits of the time.

The life of Bacon, after this, is a melancholy exhibition of moral turpitude in the character of a great man. The easy circumstances which he enjoyed might have placed him beyond the reach of temptations. He is said to have been embarrassed by the rapacity of servants. But this can afford no palliation for the perversion of justice, which characterized Bacon's official career, which struck him down from his lofty elevation, and consigned him in dishonor to the grave. The charges brought against him were, malversation in office by taking bribes, and violating justice by his decisions in the court of Chancery.

On the 15th of March, 1620, Sir Robert Phillips reported for a committee appointed by the House of Commons, to inquire into the charges brought against the Lord Chancellor, and stated that two charges of corruption had been found tenable. To the sifting of these charges, the Commons directed their attention; and after much discussion, the case was referred to the House of Lords for their decision. Struck down by the discovery of his guilt, Bacon sent in a confession to the lords appointed to try him. This first confession, however, was unsatisfactory to the judges, who demanded an ample statement of the minute details of his crimes. With this Bacon complied, averring to a deputation sent to wait upon him, to inquire if the confession was a voluntary act. "It is my act—my hand—my heart: O my lords, spare a broken reed." He was stripped of his offices, disqualified for public life, banished beyond the precincts of the court, subjected to a fine of £40,000, and to be imprisoned in the Tower during the king's pleasure.

After a short confinement in the tower he was discharged, and shortly after received a licence to come for a time within the precincts of the court, and afterwards a pardon "for all the frauds, deceits, impostures, corruptions, bribes, and other malpractices of which he had been found guilty." He was even summoned again to attend parliament; but he scarcely ever emerged afterwards from the seclusion of private life, and the pursuit of scientific studies. Some friends he had still left, but he sought his chief consolation under public odium, and the stings of his own conscience, in the walks of philosophy. He published his works on Natural Philosophy, and a history of Henry VII. after his disgrace. From science he sought what enjoyment yet remained for him on earth, and from this he received his death. While making some experiments, the retort he was using burst, and the fragments struck him on the head and stomach; fever and defluxion ensued, and he expired in the house of the Earl of Arundel, at Highgate, on the 6th of April 1626, in his 66th year, leaving no issue

The accomplishments of Lord Bacon were unrivalled in his day, and his character displayed the phenomena of great originality combined with a most extensive range of acquirements. He was a poet and an orator, a lawyer and a statesman. In the philosophy of experiment and observation, he was pre-eminent; the metaphysical and the physical were both congenial to his genius, and although the taint of immorality has induced many to doubt the extent, and to depreciate the excellence of his knowledge and ability in every department, except his method of studying nature, an impartial and searching examination will fill us with admiration as we successively trace his steps in almost every branch of intellectual exertion. In his will he says, "My name and memory I leave to other nations and to my own countrymen when some time be passed over."

Cough Syrup.

Take Thoroughwort, Hoarhound and Pennyroyal, of each a good handful, and boil them in just water enough to extract the strength; then strain off the liquor, and add an equal quantity of molasses, and boil until it forms a candy. Eat freely of this every time an inclination to cough is felt, and your cough will soon leave you.

Statistics of Human Life.

Dr. Alex H. Stephens of this city recently delivered an address before the State Medical Society, in which he stated that throughout the civilized world the duration of human life has increased, and is steadily increasing with the advancement and diffusion of medical science:

"In the city of Geneva, in the 16th century, one individual in 25 died annually. For the 18th century, one in 34; at the present time, one in 46. With us the mortality is greater, one in 40, the proportion of childhood being larger, and childhood being the period of the greatest mortality. In the British navy, among adults, none of whom are very aged, the mortality is only about one in 100. Seventy years ago the mortality in the British navy was one in every ten. In 1808, one in thirty; 1836, 13 8 10, among 1,000; a diminution to less than a seventh of the rate in 1770. In the American army, with a corps of medical officers not excelled by that of any other country, the mortality is little over one in 300 per annum. In London the mortality in the middle of the last century was one in 32. In the year 1838, the mortality was one in 36. Within the last twenty years the mortality of Russia has been one in 27; Prussia, one in 36; France, one in 39 07; Holland, one in 39; Belgium, one in 43 01; England, one in 53 07; Sicily, one in 32; Greece, one in 30; Philadelphia, one in 24 03; Boston, one in 45; New York, one in 27.83. The immigrants have made our mortality greater than that of our sister cities; in other respects it has diminished with the advance of medical science. These statistical statements might be multiplied at great length, but enough has been given to show conclusively the prodigious extent to which human life has been lengthened, with the advance and diffusion of medical science, beyond its duration in former periods, and beyond its present duration in the less enlightened countries of Europe."

There are some people who are ignorantly prejudiced against the members of the Medical profession. Were they acquainted with the labors, and philanthropy of many eminent physicians and surgeons, they would have very different opinions about them as a class. All the great writers on domestic comfort, cleanliness, ventilation and every other subject that has called attention to those sanitory reforms, which during the past century have been instituted in various countries, have belonged to the Medical profession. There is still a wide field before them, not in pointing out the evils, that they have done, but agitating their removal.

Novels and Insanity.

In a Report of the Mount Hope Institute on the Insane, by Dr. W. H. Stokes, he says, in respect to moral insanity: "Another fertile source of this species of derangement, has appeared to be an undue indulgence in the persual of the numerous works of fiction, with which the press is so prolific of late years, and which are sown broadcast over the land, with the effect of vitiating the taste and corrupting the morals of the young. Parents cannot too cautiously guard their young daughters against this pernicious practice.—We have had several cases of moral insanity, for which no other cause could be assigned than excessive novel reading. And nothing is more likely to induce this disease than the education which fosters sentiment instead of cherishing real feelings—such as result from the performance of active benevolence, sacred duty of ordinary life, and of religious obligations—which awakens and strengthens the imagination without warming the heart; and to borrow the language of an eloquent divine places the individual 'upon a romantic theatre—not upon the dust of mortal life'"

Area of the United States.

The Area of the U. States is now nearly 4,000,000 square miles, equal to the support of 200,000,000 of population, leaving the country then less thickly settled than the State of Massachusetts. The Continent, when enclosed in the arms of the Union will be equal to the support of 500,000,000. The child may now be born who will see all this realized; we are on the eve of mighty events. This Continent will yet be under one government.

LIST OF PATENTS.

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending March 27, 1849.

To Robt. D. Porter, of Harper's Ferry, Va., for improved conical valve in Twyers. Patented March 27, 1849.

To William Van Anden, of Trenton, N. J. for improved feeder and nippers for Screw cutting machinery. Patented March 27, 1849.

To John Spangenberg, of Jefferson Parish, La. for Clarification of Cane Juices. Patented March 27, 1849. Ante-dated Sept. 27, 1848.

To Nathl. B. Powers, of Lansingburgh, N. Y., for improvement in Printing Floor Oil Cloths. Patented March 27, 1849.

To Nathl. C. Sanford, of Meriden, Conn., for combined convex and concave Augur. Patented March 27, 1849.

To Wm. E. Bleecker, of Albany, N. Y. for improvement in Cooking Stoves. Patented March 27, 1849.

To J. A. Gray, of Albany N. Y., for improvement in Piano Fortes. Patented March 27, 1849. Ante-dated Sept. 27, 1848.

To A. G. Polhameus, of Nyack, N. Y., for combination of adjustable Saddle Winch. Patented March 27, 1849.

To Benj. H. Otis, of Cleveland, Ohio., for improvement in self acting Cheese Presses. Patented March 27, 1849.

To E. W. Carpenter of Lancaster, Pa., for improvement in adjusting the position of plane irons and regulating the throats of Planes. Patented March 27, 1849.

To W. A. Arnold of Rochester, N. Y. for improved Sash Fastener. Patented Mar. 27, 1849.

To Johnston Small, of Bridgewater, Pa., for improvement in Corn Shellers. Patented March 27, 1849.

To Whiting Hayden, of Windham, Conn., for improvement in guides for Warpers. Patented March 27, 1849.

To James Barnes, of Springfield, Mass., for eliptical or oval truss frames for Bridges. Patented March 27, 1849.

To F. M. Ray, of New York City, for improvement in Caoutchouc springs. Patented March 27, 1849.

To J. J. Richardson, of New York City, improvement in Thrashing and Grain separating Machines. Patented March 27, 1849.

To Jno. Crum and A. Larwill, of Ramapo, N. Y., for improvement in Splint Broom machines. Patented March 27, 1849.

To J. L. Burdick, of Norwich, N. Y., for improvement tn Printing Presses. Patented March 27, 1848.

To P. S. and W. H. Chappell, of Baltimore, Md., for improvement in artificial Manures. Patented March 27, 1849.

To Daniel Woodbury, of Perkinsville, Vt. for improvement in Grain Separators. Patented March 27, 1849.

To Jos. J. Couch of Bridgewater, Mass. for improved Machinery for Drilling Rocks. Patented March 27, 1849.

To Horace Bushnell, of Hartford, Conn. for improvement in air heating Furnaces. Patented March 27, 1849.

To Grenville Parker, of Worcester, Mass. for improved Canal Steamboat. Patented March 27, 1849.

To Jos. Ives of Bristol, Conn., for improvement in Spring Lancets. Patented March 27, 1849.

To Emanuel Harmon, of Cleveland, Ohio, for improvement in Shading Pictures by metallic leaves. Patented March 27, 1849.

To Samuel Mallard, of Staten Island, N. Y., for improvement in Dyeing. Patented March 27, 1849.

To Jno. J Sturgis, of New York City, for improvement in Type Casting Machines. Patented March 27, 1849.

To Alexander Bennett, of New York City, for improvement in self-lighting Lamps. Patented March 20, 1849.

To Jonathan Haines of Union Grove, Ill., for improvement in Harvesting Machines. Patented March 27, 1849.

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TO CORRESPONDENTS.

"G. W. L. of Pa.," "J. H. and R C. of Mass.," "J. C. M. of Mich." and "F. S. C. of Ct."—Your specifications have been forwarded to your several places of residence for signatures. As soon as signed will you please return them to this office again for our further attention.

"F. R. B. of Ill."—Such a lathe as you refer to can be furnished for $25. We think it will answer your description.

"E. A. D. of N. Y."—In all cases where it is practicable we advise inventors to construct a model and experiment, before applying for a patent. A model at any rate must accompany every application for a patent The object of your Electro Magnetic Ship Register, is good, and appears very feasible but the Pneumatic Register appears to be the application of the well known Tell Tale to the Wind Mill.

"J. H. of Mass."—We do not believe that the *sulphate* has ever been treated in the way and for the purpose you describe. Could you manufacture the carbonate direct from the *sulphuret*, it would certainly be a valuable discovery. The *acetate* was our mistake. The process must be new.

"A. McA. of Mass."—We are glad to learn that you have invented something that will keep our streets clean and healthy. If ever a poor set of beings were afflicted with muddy streets in wet weather (paved streets too,) it is us Yorkers.

"T. B. of N. Y."—Was your communication intended to be private, or not?

"O. H. P. W. of ——"—We should be pleased to furnish you the books wanted but cannot find them in the market Your generous offer, is accepted, and we shall be gratified to hear from you often. We may yet be able to do something for you.

"W. H. S. of Del."—Your bills are nearly ready, and will be sent immediately.

"R S L. of Ohio."—We will give you the information about the lithographs next week. In all likelihood you could not secure a patent for the cistern. The plan is a capital one undoubtedly, the very best you could employ, but puddling between a double wall is employed in many cases, such as for dams, reservoirs &c. The change of application is not patentable. The price for the other would be about $—. We could not exactly tell till we saw the model.

"J. W. O. of N. Y."—Direct to Royal E. House Esq., Telegraph Office, Wall st. New York.

"A. S. W. of N. Y."—The Gutta Percha belts do not operate as well as the leather ones—practice has proven this; where the fault lies we do not know, but that they do not answer so well, is a fact. Your reaction water wheel is good, but not new. It is the very same as that of Whitelaw and Stirratt, invented about 10 years ago.

"C. S S. of Ky."—Your invention does not form the subject of a patent, it is merely a change of material. Cast iron has been used for the same purpose, in this city. You will have to try again.

"W. S. of Mass"—In the history of the rotary engine, we express our opinion fully upon the merits of the different kinds. As yet they have failed to accomplish the purposes for which they are intended. Still there is a chance for hitting upon the right plan, but we do not think you have done it.

"D. W. E. of N. Y."—The engines you refer to have no boilers attached, they can be furnished for about $160. If you should prefer a horizontal boiler, it would require some brick work a vertical one would not. Our terms are cash in all cases.

"J. S. of Ky."—The engraving of your "Bee Palace" was duly forwarded to Philadelphia, agreeable to your previous order. We cannot "guess" exactly when your application will be examined but should think very soon. Number 25 Scientific American sent.

"T. D. N. of Ohio"— Your communication is all right For particulars in regard to Mr. Avery's wringer, please address him at Tunkhannock Pa. he will explain the "modus operandi" &c. with pleasure.

"C. A. C. of Md."—We have made several attempts to procure such a work as you refer to, but there is nothing of the kind to be found in this city.

"E. H. of Mass."—Your caveat has been filled in the Patent Office. As soon as convenient we should like to commence your specification and drawings for letters patent Send on your model. $8 received—all right.

"D. I. H. of Ind."—If we were to advise, we should recommend you to purchase an 8 or 10 horse power engine in case you should wish to attach more machinery. Bently's boilers 10 horse power are worth $600, and a first rate engine of that capacity would probably cost 10 or $1200. We have none for sale of that capacity.

"W. W. R. of N. H."—Your letter containing $30 was duly received. We shall proceed with your business in a few days.

"W. H. D. of Mass."—An engraving of your improved Gold Washer shall appear next week $23 received—all right.

"J. W. of La." "A. B., W. H. D. and E B. of Mass." "N. B. C. of Pa." "N. R. S. of N. Y." "G. H. F. of Tenn." and L. M. N. and C. G. W. of Ct."—Your Specifications have been forwarded to Washington accompanied with the drawings and fees.

"W. R. of Ohio."—We do not know of any windmill regulated as you regulate yours, although there are various plans to do this. A Patent was applied for a short time ago by Mr. C. Hutchison N. Y., for an improvement to accomplish the same object. Your invention appears to be good, but we could form a more correct opinion if we saw a model.

Will Charles Chinnock please call at our office and settle for a cut of his ball axle, which was published for him in the Scientific American some time since?

Our Prize Essay.

Owing to the great amount of business with which we have been pressed, during the latter part of the past month, we have been unable to get through with the consideration of the several Essays on the Patent Laws, offered for the $100 prize, with a view to the awarding of this premium, to the successful competitor. However, the decision in regard to the matter will be made on the 15th of the present month, and given to the public through the columns of the *Scientific American* in the the issue subsequent to that date.

Steam Engine for Sale.

We have an excellent 2½ horse power Engine complete, with boiler, connecting pipes, pumps, &c., which we will sell and pay the expense of boxing and carting to any pier in New York, for the small sum of $275. The engine is entirely new and the boiler is so connected with it that it may be all shipped in one parcel, so that when it is received at its port of destination it will be in order for immediate use without the expense and trouble of reconnecting pipes, setting boiler, &c. &c. It is a beautiful piece of machinery, and worth $400. Address Munn & Co., post paid Terms cash.

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FIRE ENGINES.

MESSRS. KELLS & PEAKE, of the City of Hudson, having recently invented a new and improved mode of constructing Fire Engines, are now prepared to build superior machines of that description, or of any other of the ordinary construction. Hose Carriages, Hose, and all other implements in use for extinguishing Fires. PHILIP H. KELLS.
a7 tf JOHN L. PEAKE.

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TO IRON FOUNDERS.

FINE ground Sea Coal, an approved article to make the sand come off the Castings easily; fine bolted Charcoal Blacking; Lehigh fine Dust, and Soapstone Dust for facing Stove Plates, &c. &c.; also, Black Lead Dust, for sale in Barrels, by
GEORGE O. ROBERTSON
m24 3meow* 283 West 17th st. New York.

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THE subscribers have on hand and are constantly manufacturing Hand Planing Machines of the most approved construction: will plane 22 inches in length and 10 inches in width a sample of which may be seen at Wood's Tool Store, corner of Chatham and Duane sts. N Y.

The subscribers also make to order larger sized Planers, to work by power. Also, Lathes, Drilling Machines, Mill Gearing, Shafting, Pulleys, &c. Orders left at T. J. Wood's Tool Store, or addressed to the subscribers at Union Works, Meriden, Ct. will receive prompt attention.
OLIVER SNOW & CO.

N.B. All work done by us is warranted to give satisfaction. m31 6t*

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REMOVED.

THE SUBSCRIBER has removed his Patent Agency from 189 Water to 43 Fulton street.

The object of this Agency is to enable Inventors to realize something for their inventions, either by the sale of Patent Goods or Patent Rights.

Charges moderate and no charge will be made until the inventor realizes something from his invention.

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Augusta, Maine, Oct. 28, 1848. o28 1y

A. G. FAY.

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The above pencils are peculiarly adapted to Mechanics use, as they possess great firmness and strength of points.

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FOR TUBULAR BOILERS,

From 1 1-2 to 8 inches diameter.

THESE are the only Tubes of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers. THOMAS PROSSER, Patentee,
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PATENT DRILLING MACHINE.

FOR SALE.—A first rate small drilling machine, suitable for drilling iron, copper or any other metal, and is said to be the best machine yet invented for these purposes. The machine is worked with a crank and geering, and is in perfect order for immediate use. Price 15 dollars. Address, post paid,
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Wanted.

IN an Iron Foundry at Houston, Texas, a First-rate Moulder—one who understands dry loam work. Also, a First-rate Pattern Maker. Steady employment and good wages will be paid. The applicants must be master of the business, and of sober and industrious habits. Letters may be addressed to the "Home Protection Foundry, Houston, Texas," or post paid, to Munn & Co., 128 Fulton st. m31

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WE are manufacturing and selling at our establishment in New London, Ct. a superior article of Screw Engine lathes and also hand lathes of every dimension at an extremely low price.
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AGENT FOR THE SALE OF PATENT RIGHTS.

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☞References of the highest respectability and security given if required. m31 3t*

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122 Fulton st. corner Nassau.

☞ The above is prepared to execute all orders at the shortest notice and on the most reasonable terms.

WONDERFUL CHURNS.

THAT will cause butter to come from milk in three to four minutes, for sale at $3, $4 and $5 each, at the Agricultural Warehouse of
f8 S. C. HILLS & CO. 43 Fulton st.

Z. C. Robbins,

Consulting Engineer and Counsellor for Patentees.

Office on F street, opposite Patent Office, Washington, D. C. j20 tf

INFORMATION WANTED.

THE address of the gentleman, who advertised in this paper on the 29th April 1848, for a person competent to erect a Shot Tower &c. Address
m20 3t* JOHN, Baltimore Shot Tower.

MORSE'S AIR DISTRIBUTOR.

For Burning Wet Saw Dust, Tan, Turning Chips or other fine Fuel.

Patented 1846—Re-issued 1848.

IN LOCKPORT N. Y., the Steam Double Saw Mill of R. H. Stevens, running two Saws 160 cuts per minute—2 Stave Sawing and one Planing Machines, Jointer and Circular Saw for cutting off, is driven wholly by the saw dust as made from green logs, bark and clips, without wood or slabs, except for kindling, and has been since October last. Two boilers, 20 feet long, 40 inches diameter, each 2 flues, with heaters, and a chimney 40 feet high are used; a good draft being indispensible.

In Buffalo, N. Case & Cos. Tannery has been running since May 1848, a large Bark mill, 2 setts heavy hide mills, 4 pumps, one roller, two last turning and two last finishing machines and one circular saw for sawing timber, with TAN, without a stick of wood; kindling up with turning chips. Before May last, two cords of hard wood were used daily to do the same work, saving more than one thousand dollars per ann. and using up worthless fuel. A large number of Tanneries, Steam Saw Mills, & Machine shops have introduced this great discovery in western New York.

Every Saw Mill and Tannery runinng by steam in this State, can do likewise, and save hundreds of thousands of dollars; and all establishments running by steam, where fine fuel can be had can make a great saving in cost of fuel, by applying to the subscriber, (post paid,) for the right to use in this State and the castings, or to Dr. John A. Campbell, Buffalo. The whole expense is usually saved in cost of fuel in from three to 6 months. Competent persons sent to place the castings if required.

☞ Infringements on this Patent will be prosecuted forthwith. L. A. SPALDING.
Lockport, N. Y. m24 3t*

PREMIUM SHINGLE MACHINE.—Public attention is invited to an improvement in making Shingles by means of a Machine patented by Jonathan Bennett, in August last. Nearly two years' trial enables the subscribers to speak with confidence of its superior merits.

By the arrangement of the knives this machine preserves almost entire the grain of the timber, (which is a great consideration in the wear of shingles,) jointing them, and producing near one-third more from a given quantity of time, than can be got by any other process now used, and every shingle in perfection—without liability to clip, shorten or mar them in any way by checks or shakes, and leaving every one as sound as if riven. It has also the advantage of greater dispatch, as two shingles are produced by each descending motion of the gate to which the knives are attached. The HIGHEST PREMIUM was obtained by this machine at its exhibition last fall, at the National Fair held in the city of New York.

Persons desiring to purchase rights for Pennsylvania, New Jersey and Massachusetts, address
JAMES D. JOHNSON, Easton, Conn., or
DANIEL SANFORD, 163 South st., N. Y.
For any of the States not above mentioned, address JOHN H. PETERS, Kent, Ct. m31 2t*

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☞On payment of the yearly subscription to the publishers of the

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of ONE DOLLAR, subscribers will receive gratuitously, a splendid large portrait of PRESIDENT TAYLOR, and also have the chance of securing one of the

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worth from $25 to $1 each, which are to be distributed among the subscribers to that paper, at the close of the present year.

The Weekly Sun for 1849, besides being the best and cheapest Family Paper in the world, will be enriched by a series of ORIGINAL PRIZE STORIES written expressly for this paper, and for which Four Prizes of $250 have been offered by the Proprietors.
BEACH, BROTHERS, Sun Office.
m31 tf corner of Nassau and Fulton sts.

SUPERIOR TURNING LATHES.

JAMES STEWART, 15 Canal-st. and 106 Elm-st. is constantly manufacturing and has now on hand between 50 and 60 superior lathes of the following descriptions and at reasonable prices, namely:

Dentist's Lathes, very highly finished.
" " common,
Brass and Wood Turner's Lathes.
Jeweller's and Pencil-case maker's very superior.

J. STEWART is also authorized to act as agent for the sale of the celebrated Lathes manufactured by James T. Perkins of Hudson, of large size and at prices from $250 to $800. A specimen of this description may be seen at his factory as above.
j27 tf

BRITISH PATENTS.

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PATENT OFFICE
m10 tf 166 Fleet Street, London.

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THE subscribers are now prepared to supply Devlan's Patent Oil in any quantity. Machinists, Manufacturers &c., are invited to examine the article. Certificates of its superiority over all other oils from some of our most extensive manufacturers can be seen at this office.

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WHERE he continues to manufacture at short notice his Superior Turning Lathes, Drilling, Slotting, Bolt and Gear Cutting Machines of all sizes, together with all other tools required in engine and Machine Manufactories. All made in the best possible workman-like manner. Each tool is carefully adjusted before leaving the manufactory. Communications for particulars cheerfully responded to by addressing, (Post paid.)
j13 3m. G. B. HARTSON

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Restoration of Sight.

The following article abridged from the Philadelphia Ledger, will be found not uninteresting, as something connected with science :—

The Boston Traveller gives some interesting accounts of experiments made by Professor Bronson, in removing imperfections of the sight, produced by age or malformation. According to the Traveller, old people have been enabled to lay aside their spectacles, and people of all ages who suffered from short sight have been entirely cured. The Traveller says that Bronson is the author of these discoveries, and that his practice consists entirely in manipulation:

But while giving credit to Professor Bronson for his efforts in doing good, and while admiting that his method of treating the eye is original with himself, we do not admit that he was the first discoverer. The very treatment ascribed to him for restoring decayed sight, was discovered long ago by John Quincy Adams, and successfully practiced on himself.

Mr. Adams did not communicate his discovery to the world, but mentioned it accidentally, and as of no great importance to two or three friends in the course of his life.

We certainly wonder at him and them, for not perceiving its general utility. Mr Adams never wore spectacles, his sight enduring to the last. Yet those who remember him in private conversation, may remember his habit while listening, of manipulating his eyes with his fingers by passing them gently over the surface from the external to the internal angle.

The decay of sight that is remedied by convex spectacles, is caused by the gradual absorption of the humors, or relaxation of the coats, rendering the transparent cornea less convex. The manipulation, or gentle pressure, perhaps by stimulating the coats, and thereby causing them to contract, restores the original convexity, and subsequently the original perfection of sight. In rubbing or wiping the eyes, we naturally pass the hand or towel over the convex surface, from the internal to the external angle. This diminishes the convexity, and thus promotes the decay of sight, and therefore should be carefully avoided. The pressure, whether in wiping or manipulating, should proceed, in eyes originally perfect, from the external to the internal angle. Short sight, remedied by concave glasses, is caused by undue convexity of the external cornea, whether congenital or caused by disease, all wiping, rubbing or manipulation should proceed from the internal or external angle, the reverse of the motion necessary to the case first mentioned. In manipulation, care must be taken against pressure too hard, or continued too long, which may develope inflammation.

[Every science is made up of facts—general facts arranged into a system. If the above conclusions are the result of a few isolated cases only, then no dependence can be placed upon it as a branch of correct science ; but this is easy to determine. Every person can test the system, and if it is correct, we say that no greater discovery has ever been made, because of its very simplicity, and the great benefits it will confer upon the whole human family.

To Separate Gold from Copper.

The following is Dr. Jackson's process for separating gold from copper. The alloy being dissolved in aqua regia the solution is to be evaporated to small bulk and the excess of nitric is thus driven off.

A little oxalic acid is then added and then a solution of carbonate of potash sufficient to take up nearly all the gold in the state of aurite of potash is gradually added. A large quantity of crystallized oxalic acid is then added so as to be in great excess and the whole is to be quickly boiled. All the gold is immediately precipitated in the form of a beautiful yellow sponge which is absolutely pure metallic gold. All the copper is taken up by the excess of oxalic acid and may be washed out.

Boil the sponge in pure water so long as any trace of acidity remains, and the gold is then to be removed from the capsule and dried on filtered paper. It may be pressed into rolls, bars or thin sheets, by pressing it moderately in paper.

By moderate pressure, the spongy gold becomes a solid mass and burnishes quite brilliantly.

The jeweller or goldsmith will find spongy gold to be quite convenient when he requires it for a solder, and it is a convenient form of the metal for making an amalgam for fine gilding. It is good for soldering platina.

The method of separating fine gold from alloys, is very simple, and cheaper than the usual processes. It is applicable in the separation of gold from ores that may be treated by acids, and is vastly preferable to the method commonly used by chemists and assayers.

When making oxyde of gold for dentist's use, the chemist will find that oxalic acid added to his potasic solution, will at once recover all the gold that is dissolved in an excess of the alkaline solution.

A Good Salve.

" Take an egg and boil it hard, then take out the yolk and fry it in half a tablespoonful of clean lard for about 5 minutes, and you have an excellent salve. It is especially good for sore nipples and requires just to be rubbed on as occasion may require."

One of our subscribers sends us the above from Hamilton Co. Ohio, and we must say that it is a good salve. We have seen it tried and judge of its merits from a practical experience.

A Chain Pump.

This pump consists of a tube, made by nailing together two pieces of two inch plank each of which has a semi-circular groove, and thus forming a tube.

This tube is the entire length of the well through which passes an endless chain, which is moved by a wheel and crank at a convenient distance above the well curb. At proper distances apart on the chain, flat discs of iron or leather are placed, their diameter being somewhat less than that of the tube.

Chilblains or Frosted Feet.

Mix, in a glass vial a quarter of an ounce of pure muriatic acid with two ounces of water. Wet a piece of sponge or soft cloth with the liquid and gently bathe the parts that have been frozen. Let it dry on, and wrap the feet in bandages, or draw on a pair of old stockings to keep the bed linen from contact with the acid, which will drop into holes wherever it is touched by it. This speedily cools the inflamation, allays the intensely painful itching, and, when the frost is not very deep, it cures by a few applications.

When the chilblains are of long standing, and the skin has cracked, or when sores are formed, the first two or three bathings are apt to cause a smarting pain that is somewhat discouraging to persons unacquainted with the virtues of this simple remedy ; but if they will persevere they will be rewarded by a complete cure.

How to dislodge a Fish Bone from the Throat.

It sometimes happens that a fish bone accidentally swallowed will remain in the œsophagus, and occasion serious inconvenience ; in fact, instances have been known where so much irritation had arisen that death has followed. In such cases it is advisable, as soon as possible, to take four grains of tartar emetic, dissolved in one half pint of warm water and immediately afterwards the white of six eggs. The coagulated mass will not remain in the stomach more than two or three minutes, and the probability is that the bone will be ejected with the contents of the stomach. If tartar emetic is not to be found conveniently a teaspoonful of mustard dissolved in milk warm water and swallowed will answer the same purpose.

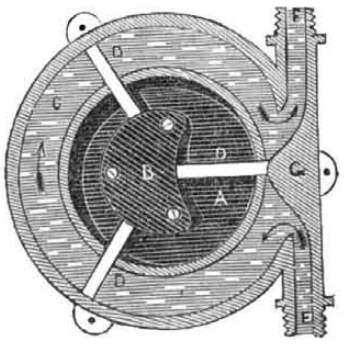
A solution of alcohol with a very little camphor brushed over the backs of books, will keep them from mildew.

History of the Rotary Engine.

Prepared expressly for the Scientific American.

FRENCH ROTARY ENGINE.

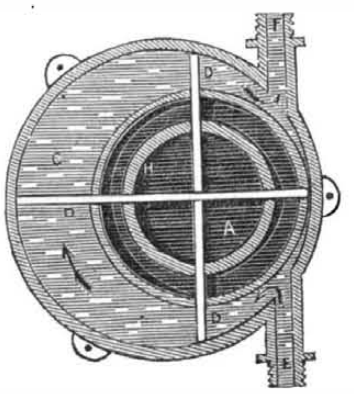
FIG 56.



This is a vertical section of a French rotary engine. It is composed of an inside revolving drum and an outside stationary one. A is revolving drum ; it runs round with its edge in a concentric groove cut or cast in the inside of the stationary cylinder C. B is a cam fastened securely to the cylinder C. D D D, are pistons that revolve with A and slide out and in proper grooves in the revolving cylinders G is a stationary abutment that divides the induction and exhaust tubes E F. This abutment is placed so near to the periphery of the revolving drum as to be always in contact—steam tight with it. The arrows indicate the course of the steam, now represented as entering by E, and departing through F. The cam B is such a shape, as to allow the piston D when it comes to the abutment G—to be pressed in by the abutment, but when the piston is past G, the cam B then presses out the pistons, so that they always move steam tight in contact with the inner surface of the outside stationary cylinder, to let the steam have full effect upon the pistons to propel the revolving drum A. This drum has a shaft (not seen in the engraving) which extends from its centre through a stuffing box on the outside cylinder. The power is communicated by the said shaft to the other machinery. This engine is very simple and easily constructed.

In 1829 Mr. Thomas Smith of Derby, England, obtained a patent on a rotary engine which Hebert describes as being very ingenious and different from others that went before it. It had no fixed fulcrum for the steam to act against, but had two vanes turning upon axis whose centres of motion were coincident with each other and with the axis of the cylinder into which they fitted steam tight. The axis of the two vanes were connected to a train of eccentric toothed wheels which causes them to revolve with different velocities more curious than useful.

FIG. 57.



This is a rotary engine which was exhibited in this city about nine years ago. There was no patent on it we believe, but it was represented to be new then. The same kind of engine, however, is constructed upon the principles of the preceeding one, only it has an interior moveable cylinder H, and it has two pistons, which cross one another at right angles, being feathered to the middle for that purpose, and answer the purpose of four pistons. We prefer the first rotary to this. It is more simple and is not so liable to get out of order, neither do we think there is as much friction.

By covering with fine charcoal the earth of a pot in which there is flowers growing, they will assume far deeper tints of coloring. Pale and sickly looking roses, have been by this process transformed in a few days, into the rich bloom of health and beauty.

LITERARY NOTICES.

Minifie's Mechanical Drawing Book.

We have received a copy of the above work by William Minifie, Esq. architect and teacher in drawing in the Central High School of Baltimore It is the best work on Drawing that we have ever seen and is especially a text book of geometrical drawing for the use of mechanics and schools. No young mechanic, such as a machinist, engineer, cabinet maker, millwright or carpenter, should be without it. It is illustrated with fifty six steel plates and contains more than 200 diagrams. The author Mr. Minifie, shows that he is master of his subject in all its various branches, which he has illustratad with plans, sections. elevations, perspective and linear views of buildings and machinery. Such books—are books.

This book is for sale at our office—the price is $3, which can be enclosed in a letter, post paid, and addressed to Munn & Co. We will have something more to say about it again. The price is very moderate considering the quality, the sterling worth and style of the work.

Godey's Lady's Book for April is a magnificent number, and we take pleasure in awarding it the highest commendation, for it is truly a work of extraordinary merit, as thousands can testify who have been the fortunate readers of it from its commencement. It is splendiddly embellished with 12 engravings, reflecting the highest credit upon the artistical corps. If space would allow we should like to give our readers a full description of its contents. H. Long & Brother, agents for this city.

Sartain's Union is equally deserving, and it will puzzle the Magazine publishers to excel him in engravings and excellence of reading matter. We are pleased to hear of the success of this enterprize. Godey has done well and why should not Sartain and others meet with encouragement from a reading community.—Dewitt & Davenport, agents for New York ; also agents for Peterson's Ladies National.

Messrs. Pratt & Co 161 William st. this city, have just issued the New England Mercantile Business Directory, containing a map of each State, the name, location and business of merchants, manufacturers, professional men, artists, corporations, &c. It is an excellent publication, and should be in the hands of every man of business, as a book of reference.—It contains over 800 pages, closely printed, price $1, which we consider very cheap for so valuable a work.

Messrs. Fowlers & Wells of this city, have published a very interesting work upon the Ship Fever, its causes and prevention, by Dr. Combe. Price 6 1-4 cents.

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